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ABSTRACT

The Department of Administrative and Policy Studies (APS), University of Pittsburgh (Pennsylvania), completed six research reports about its Conceptual Mapping Project. The reports reproduced here originally appeared in the "Occasional Paper Series" of the APS. They are presented in order of the chronological appearance as follows: (1) "Mapping Knowledge Perspectives in Studies of Social and Educational Change," June, 1993 (R. G. Paulston); (2) "The Promise of a Critical Postmodern Cartography," August, 1993 (R. G. Paulston and M. Liebman); (3) "Social Cartography: A New Methodology for Comparative Studies" September, 1993 (M. Liebman and R. G. Paulston); (4) "Mapping and Remapping Discourse in Educational Policy Studies," June, 1996 (J. V. Nicholson-Goodman and R. G. Paulston); (5) "Postmodernity's Influence in Comparative Education Theory and Debate," July, 1996 (M. Liebman); and (6) "Mapping Visual Culture in Comparative Education Discourse," August, 1996 (R. G. Paulston). These reports contain numerous tables, figures, references, and notes. (LMI)

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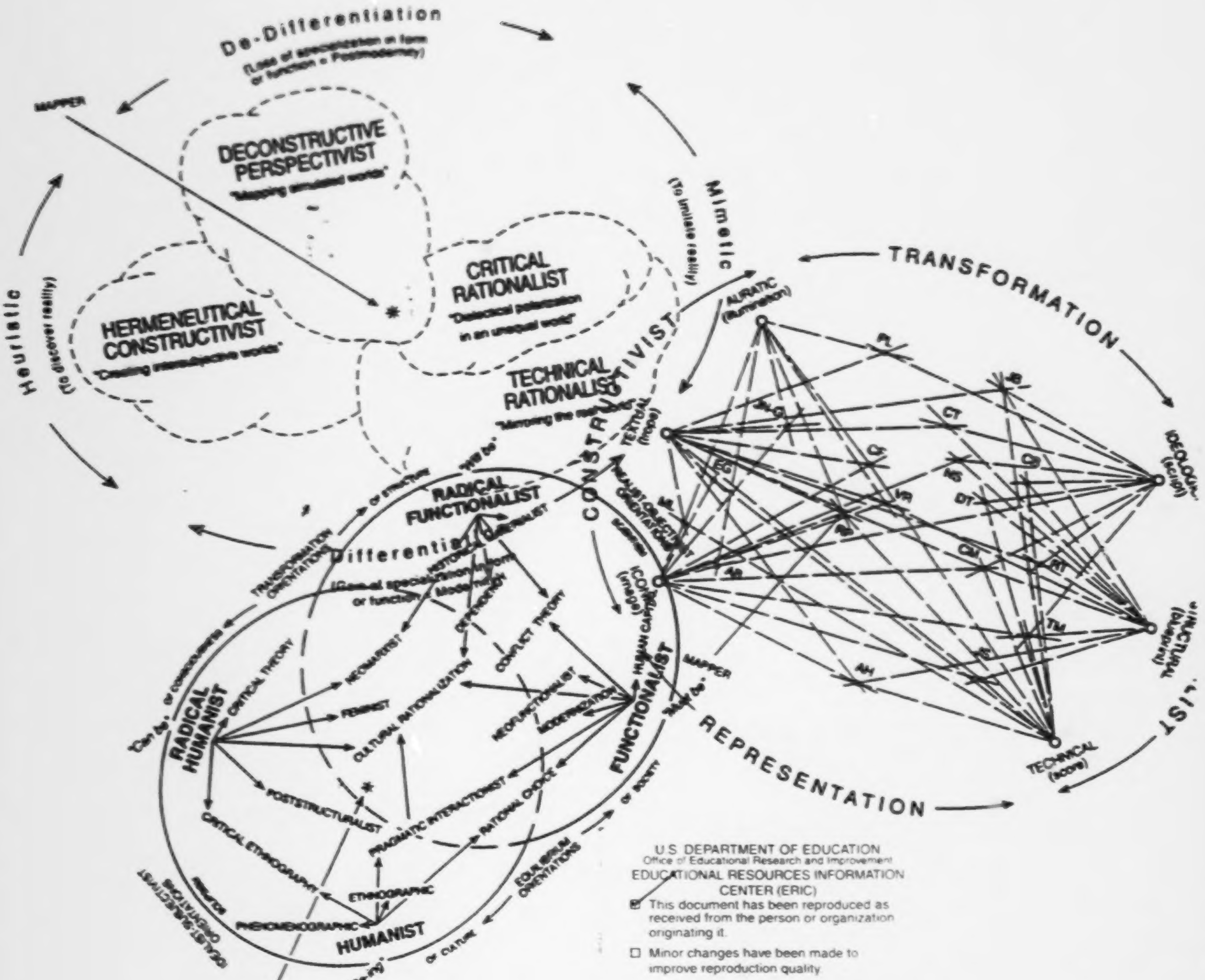
MAPPING MULTIPLE PERSPECTIVES

RESEARCH REPORTS OF THE
UNIVERSITY OF PITTSBURGH
SOCIAL CARTOGRAPHY PROJECT, 1993-1996



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MAPPING MULTIPLE PERSPECTIVES:

RESEARCH REPORTS OF THE UNIVERSITY OF PITTSBURGH SOCIAL CARTOGRAPHY PROJECT, 1993-1996

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"Behold I will do a new thing...shall ye not know it?"

Isaiah 43:19

This collected work is dedicated to the memory of Soren Kierkegaard.

> "The division of the self into contradictory voices (i.e., the dialectic) swings between gravity and play, and (in Kierkegaard's memorable phrase) 'keeps open the wounds of possibility.' This view prevents the frozen certitudes of the dogmatic, the inertia of the canonic. In his reflexes of argument and sensibility, Kierkegaard sought to translate out of music its capacity for counterpoint...for self-subversion. Like no other major thinker, perhaps, Kierkegaard is polyphonic."

G. Steiner (1994). *Soren Kierkegaard.* Trans. W. Lowrie. New York: Alfred A. Knopf, p. xi.

> "...the spirit of dialectical fearlessness is not so easily acquired; and the sense of isolation which remains despite the conviction of right, the sadness of parting from admired and trusted authorities, is the demarcation which marks the threshold of its acquirement."

S. Kierkegaard (1944). *Concluding Unscientific Postscript.* Trans. D. Swenson and W. Lowrie. Princeton, NJ: Princeton University Press, pp. 15-16.

INTRODUCTION

This compilation of six research reports makes available in one place a good bit of the intellectual yield of the APS Conceptual Mapping Project. Since its inception in 1993, this Project has provided new knowledge about ways of patterning perceptual fields. While our efforts to conceptualize difference are perhaps best described as exploratory, we suggest that they offer both scholars and practitioners a useful new tool for comparative analysis.

The reports reproduced here originally appeared in the Occasional Paper Series of Pitt's Department of Administrative and Policy Studies. They are presented in order of their chronological appearance, i.e.,

No. 1. *Mapping Knowledge Perspectives in Studies of Social and Educational Change*, June, 1993 (R. G. Paulston)

No. 2. *The Promise of a Critical Postmodern Cartography*, August, 1993 (R. G. Paulston and M. Liebman)

No. 3. *Social Cartography: A New Methodology for Comparative Studies*, September, 1993 (M. Liebman and R. G. Paulston)

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No. 5. *Postmodernity's Influence in Comparative Education Theory and Debate*, July, 1996 (M. Liebman)

No. 6. *Mapping Visual Culture in Comparative Education Discourse*, August, 1996 (R. G. Paulston)

Correspondence concerning this Project, its rationale, activities, and outcomes is invited. We would also very much like to hear about related social mapping work in other fields. E-mail comments, critiques or queries may be directed to me at: mjalm+@pitt.edu. Copies are available from APS @ $10.00. Make cheques to "The University of Pittsburgh" in U.S. funds only. Mailing address is Social Cartography Project, 5T16 Forbes Quadrangle, University of Pittsburgh, Pittsburgh, PA 15260.

The interested reader may also wish to consult the more comprehensive international account of our mapping project available in R. G. Paulston (Ed.), *Social Cartography: Mapping Ways of Seeing Social and Educational Change*. (New York: Garland Publishers, 1996). Forthcoming, late 1996 with nineteen chapters and over sixty social maps and illustrations. To order, phone 1-800-627-6273.

Rolland G. Paulston
Professor and Project Leader
October, 1996

MAPPING KNOWLEDGE PERSPECTIVES IN STUDIES OF SOCIAL AND EDUCATIONAL CHANGE

Rolland G. Paulston

APS Conceptual Mapping Project

Research Report No. 1

June, 1993

6

ABSTRACT

This study has used discourse analysis and phenomenographic method to examine the weave of discourses and practices about educational change in comparative and international education texts over time as bricolage–i.e., as historically locatable assemblages of cultural codes and practices; and as cognitive maps spacing discursive formations and ways of thinking at macro and meso levels of social reality. Three major textual orientations to knowledge in the field are identified as the orthodox, the heterodox, and the emerging heterogeneous. Relations between discourse communities today are also identified and discussed noting that comparative educators and their texts are becoming more reflexive and eclectic thus allowing new ideas and new mapping opportunities to emerge from the reinscription of earlier theories and the changing spatial relations of our time.

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> "Aporia is a figure whereby a Speaker sheweth that he doubteth either where to begin for the multitude of matters, or what to do or say in some strange or ambiguous thing."[1]

> "Only metaphysicians [i.e., those who argue for a privileged final vocabulary] think that our genres and criteria exhaust the realm of possibility. Ironists continue to expand that realm."[2]

> "In the 1990s post-modernism has become a mature and multifarious movement that cannot be ignored by practitioners of the human studies. It is situated throughout the reaches of discursive space. The point is to domesticate it by selective appropriation rather than take it whole or attempt to wish it away."[3]

Today, long dominant goals and assumptions underlying modern theories of education and society are undergoing a ravaging subversion. Post-structuralist, post-modernist, post-patriarchal, post-Marxist--yea, post-everything it would seem--theories push forth new ways of seeing grounded in, paradoxically, anti-essentialist and anti-foundationalist ideas. Social relations and basic notions of reality and knowledge production undergo fragmentation, and many find themselves confused and disoriented in a shifting intellectual landscape with new knowledge communities speaking seemingly incomprehensible research languages. Surprisingly swift and unexpected, this rupture is also imploding the study of educational change. Now no meta-narrative, or grand theory, be it positivism or humanism, functionalism or Marxism can credibly claim hegemonic privilege and the right to fill all the space of truth or method. Given this opening up of ontological and epistemological pluralism, how are we as educators and scholars to move past our present unsettling aporia into a post-modern space of heterogeneous knowledge relations with their promise of renewed intellectual energy for our time?

In this study I argue for the utility of mapping knowledge perspectives as a kind of cognitive art, or "play of figuration" to help orient educators to knowledge communities and their cultural codes, and to reinscribe earlier modernist vocabularies into post-modern ways of seeing and representing educational change knowledge. To do this, I use a "perspectivist" approach to examine educational change discourse in comparative and international education texts since the 1950s, and suggest how the diverse ways of seeing discovered using textual exegesis may be mapped at macro and meso levels of social reality. Here I am guided by Bourdieu's notion of "habitus" where intellectual fields are viewed as systems of "durable, transposable dispositions" produced by a dialectical interaction with objective structures and actors' views of the world.[4]

To reveal such dispositions I use Barthes' notion of text, as an arrangement in a certain order,[5] as "that social space that leaves no language safe or untouched, that allows no enunciative subject to hold the position of judge, teacher, analysis confessor, or decoder" (p. 51). This interpretive approach is a political and intellectual practice used to compare educational texts intertextually–i.e., in relation to other texts, rather than in relation to their authors. A distinction between the work and the text should also, perhaps, be noted. Where literary works are concrete and visible, the text reveals and articulates itself according to and against certain rules. Where the work is held in the hand, the text is held in language. Here the original modernist linking of subject (author) and object (work) is replaced with practices (writing) and the intertextual (field). This relationship of the text to its intercultural field, as illustrated in the three figures following, is creative, active, and practical. Texts are seen to interact continuously in an open field which they produce and by which they are produced, and in which they may be interpreted, typed and topographically mapped. The guiding idea here is phenomenographic. It is well expressed by Olsson's argument that "To understand is to condense a thought-position into a point and then place it in relation to other points"[6] In this chapter, I use a phenomenographic analysis to enter into texts and type points, or thought positions, in some sixty exemplar studies that seek to explain educational change theory and practice. These positions, once discovered, are then transferred to a two dimensional space The ensuing cognitive map of disparate yet interrelated points is, accordingly, a provisional construct, one old social mapper's unique contribution to understanding difference

Changing Representations of Educational Change Knowledge

While comparative educators only recently began to discuss explicitly their theoretical framing dispositions following the appearance of Thomas Kuhn's magnum opus, *The Structure of Scientific Revolutions* in 1962, implicit knowledge perspectives can be identified in the field's early discourse. The 18th and 19th Century foundational texts of Berchtold, Jullien and Basset, for example, all advocate encyclopedic description and macro comparisons of public instruction in order to generalize on its efficiency in the then emergent project of individual and social modernity. With the ensuing construction of national systems of education in the industrial, or modern world, and their transfer in part to the colonized world, comparative educators shifted their attention to the study of social forces and contexts in the shaping and differentiation of these systems. By 1950, the stories of Sadler, Kandel and Hans--among others--helped to consolidate the paradigm of modernity (see Figure 3) as the dominant, even if implicit and unspoken, way of representing or modeling national and crossnational educational phenomena.

Figure 1 below seeks to capture changing textual knowledge orientations in exemplar comparative education scholarship during three major periods: i.e., in the 1950s and 1960s when an orthodoxy of functionalist and positivist ways of seeing dominated discourse; in the contentious 1970s and 1980s when the radical functionalist, humanist and radical humanist paradigms challenged positivist and functionalist hegemony, and unresolved heterodox struggles to replace one master narrative with another prevailed; and in the emergence of a more heterogeneous post-paradigmatic period of competing cultural clusters and proliferating mini narratives as we move into the 1990s.[7] To facilitate comparison, Figure 1 identifies eight kinds--or directions--of hermeneutic, or discursive reference within the texts noted, i.e., the representation of knowledge control and organization; of knowledge and ontology, framing, and style; of knowledge, gender and emotions; and of knowledge products. As Gottlieb points out, formal methods of discourse analysis are relatively new in educational studies. From this perspective, knowledge is not "found" using positivist procedures, but is constructed in and through the discourses of distinct and specifiable cultural clusters, or knowledge communities. Discourse analysis seeks to identify patterns of language that both shape and reflect what is called "thinking," i.e., the basic intellectual commitments held in language.[8] These commitments, or characteristic dispositions, are presented in Figure 1 as a "bricolage," i.e., an assemblage of cultural odds and ends. Bricolage, as a tinkering with disparate ideas, serves as a metaphor for the systems of thought through which texts are seen to classify the components of the world and the myths through which texts explain themselves. These myths and systems are not united by logical continuity nor are they totalizing. Bricolage, as a non-hegemonic alternative to Western rationalism--which seeks to unify totality according to a system patterned after deductive logic—is revealed in Figure 1 as constructed cultural complexes without reference to some ulterior reality.

Orthodoxy

Following World War II with the crises of decolonization and cold war competition, comparative education studies--and especially those in North America--continued to be framed

Characteristics of Textual Representations	Linear 1950s - 1960s	Branching 1970s - 1980s	Intertwined 1990s -
Knowledge Control and Organization:	Orthodoxy; hierarchial and centralized	Heterodoxy: Emergence of "neo-" variants and new inquiry perspectives	Heterogeneity: Disputatious yet complementary knowledge communities
Knowledge Relations:	Hegemonic and totalizing	Paradigm clash -- i.e., "either/or" competition of incommensurable world views	Emergent post-paradigmatic -- i.e., rhizomatic and interactive
Knowledge Ontology:	Realist views predominate	Realist and relativist views contest reality	More perspectivist views encompass multiple realities & perspectives
Knowledge Framing:	Functionalism and positivism dominant	Functionalist, critical and interpretive views compete and decenter	More eclectic, reflexive and pragmatic
Knowledge Style:	Parsimonious and value-free	Agonistic and partisan	Increasingly intertextual, ecologistic, & contingent
Knowledge/Gender:	Maleness: Logic dominant	Feminist ideas emerge, compete, decenter	Gender issues more open and indeterminate
Knowledge/Emotions:	Optimism and confidence	Disdain, incredulity, or exhilaration	Ambivalence -- i.e., nostalgia for certainty; delight in diversity
Knowledge Products:	Law-like crossnational statements the ideal	Competing ideologies	Explanation, interpretation, simulation, translation and mapping
Illustrative Texts:	Adams & Farrell (1969); Anderson (1961); Bereday (1964); Husén (1967); Noah & Eckstein (1969); Schultz (1961)	Anderson (1977); Bourdieu & Passeron (1977); Bowles & Gintis (1976); Carnoy (1984); Clignet (1981); Epstein (1983); Heyman (1979); Husén (1988); Karabel & Halsey (1977); Kelly & Nihlen (1982); Paulston (1977)	Altbach (1991); Cowen (1990); Lather (1991); Masemann (1990); Paulston (1990; 1993); Paulston & Tidwell (1992); Rust (1991); Stromquist (1990); von Recum (1990)

Figure 1. A "bricolage," or assemblage, of changing representations of educational change knowledge in comparative and international education texts, 1950s-1990s.

in evolutionary and functionalist perspectives while moving closer to the social sciences and their concerns to secure progress through social and economic development. Using the vocabulary, if not the experimental "rigor," of the natural sciences, comparative and international education studies flourished during these decades of functionalist and positivist orthodoxy and drew strength from the creation of scholarly journals in the field, an increase in governmental and foundation support, and the founding of numerous comparative education centers in leading US and European universities.

At the University of Chicago's prestigious Comparative Education Center, for example, the first director C. Arnold Anderson, argued in a foundational text (1961) that the ultimate aim of comparative education must be--as with the social sciences--systematic knowledge of causation, i.e., the shaping of the results of analysis into law-like generalizations. Where half a century earlier educational research and educational psychology programs had gained entrance and eventual methodological respectability in major European and North American universities using statistics and experimental methods, Anderson argued that comparative education should seek acceptance with a strategy of: 1) integration with the social sciences, 2) the use of the natural sciences model of hypothesis testing and analysis of co-variation, and 3) a commitment to theoretical explanation and generalization.[9]

To this end, Anderson proposed a strengthening of two broad yet complementary approaches to comparative education and their integration into social science research. The first, intra-educational analysis generating strictly educational data, viewed education as if it were an autonomous social system. This strand would generate the statistical correlations and "hard" data seen as indispensable for comparing educational systems and practice. The second approach, inter-disciplinary research on educational-societal relations, would examine the social, political and economic functions and tasks laid upon the schools by a society. Anderson's strategy for the creation of a more systematic and social scientific comparative education found strong support in related efforts to establish the field both in the United States and in Western Europe. Anderson saw only hypothesis testing using nomothetic and functional approaches as suitable knowledge framing ideas if comparative education aspired to capture relevant aspects of "the concrete reality" (p. 11).

Bereday also proposed a comparative methodology that built upon positivist and evolutionist assumptions, yet chose instead to stress the need for an inductive non-social science comparative methodology capable of simultaneous analysis of educational practice across national frontiers. Ideally, hypothesis testing to advance the identification of laws in comparative education might also follow. Bereday's methodology-driven approach sought to develop an increasingly analytical but dispassionate field akin to comparative politics and comparative religion, i.e., a field "unhampered by ethical or pragmatic considerations."[10]

In a closely related text, Noah and Eckstein argued that a more scientific comparative education would not be found in comparative method alone, as advocated by their teacher Bereday, but in a more rigorous inductive method as proposed by Cohen and Nagel in their *An Introduction To Logic and Scientific Method*. Noah and Eckstein saw the attainment of rigorous scientific explanation in comparative education as a difficult goal, but one most likely to result from a methodological empiricism grounded in functionalist assumptions that avoided reflection on ideology and theory. Their research framing choices focused on testing low level propositions about the relationship of education to society. Questions about the form and function of schooling would be restricted to matters of pedagogical efficiency, and correlational analysis of educational relations with more complex systems. Here the correlational method was seen as a defining if imperfect substitute for experimentation. Explanation in comparative education is presented as progressive, i.e., as an evolutionary process proceeding sequentially from: a) curiosity, description and primitive quantification to b) qualitative interpretation examining forces and factors, to c) sophisticated quantification offering a means of rigorous scientific testing to support policy and planning, to d) "scientific prediction."[11] The empirical science model would, Noah and Eckstein contended, bring comparative education into a condition of epistemological modernity at a time when, ironically, not only scientism, but the very foundations of modernity were coming under serious attack in the social sciences and the humanities as well.[12]

The International Evaluation of Educational Achievement Project (IEA), widely reported by Husén and others brought to fruition these antecedent calls for a more scientific comparison of educational practice in schools around the world. Driven in part by U.S. fears following Sputnik, and Western European concerns with the emergence of mass secondary education, the IEA project drew most heavily on empirical and quantitative traditions of measurement as developed in educational psychology. For the first time, comparative educators would measure international differences in school achievement using internationally developed objective tests in what was claimed to be a pathbreaking effort to account for variations in test results. In time, Husén suggested, a more scientific understanding of intellectual functioning and curriculum would produce efficient and predictable instructional practices.[13] The project also provided a working model of a new comparative education seeking causal explanation grounded in correlational studies rather than the narrative description and moral exhortation commonly found in earlier studies. With the involvement of comparative educators from Teachers College, Columbia University, the Universities of Chicago and Stockholm, and numerous ministries of education around the world, the project optimistically sought to validate the scientific aspirations of the field in the 1950s and 1960s. Viewing the world as an educational laboratory, and using comparative and correlational methods, the IEA project initially expressed the aim of discovering a wide range of cognitive, pedagogical, and curricular universals. After decades of testing, considerably less grand findings pointed to the importance of unintended outcomes of schooling, and the dangers of too much data and too little conceptual modeling. Both comparison and policy implications remained problematic given the Project's dependence on precoded, forced choice survey questions, and a near total lack of attention to questions of meaning and context, i.e., to the consequences of educational embeding in complex webs of cultural, economic and political relations.

By the late 1960s a number of international funding agencies and comparative educators turned their attention to educational change efforts in Third World settings, a new branch of comparative education that addressed problems of educational planning, development, and theory construction in largely macro studies of education and social change. In what might be seen as a canonical text representing this structural-functional variant of the prevailing orthodoxy, Adams and Farrell proposed that the primary purpose of comparative and development studies should be the generalization and specification of testable propositions, or statements of relations across objective variables.[14] Scholars in comparative education were seen to have been most reluctant to undertake this task; thus, . . . "our knowledge remains scattered and unsystematic." The authors' corrective advocated a structuring of knowledge within and across educational systems according to Parsonian notions of unilineal differentiation, a process that "will follow an approximately similar sequence in all societies" undergoing modernization.[15]

Heterodoxy

By the early 1970s, the modernist project had achieved regnant status in comparative and international education studies at the same time it came under widespread attack in the social sciences and in development studies from a combination of emergent critical and interpretive knowledge communities.[16] Reasons for the vulnerability and eventual decentering of functionalism are suggested in the shift from a segregated to a plural society in the U.S. With cultural pluralism came new advocates of epistemological and ontological pluralism. Functionalist theory, moreover, proved unable to adequately predict, control or explain frequent development failures.[17] Equally important, the rise of a global field with numerous new scholars and comparative education programs in Europe, Asia and in the Third World saw an increased recognition of antithetical neo-Marxist, critical theory, feminist, hermeneutic, and dependency perspectives. Third World critics especially came forth to challenge what they saw as a self serving, elitist and patriarchal Northern functionalist discourse.[18]

Decentering of the structural-functionalist worldview with its positivist epistemological vision also followed from the publication of Berger and Luckmann's influential text, *The Social Construction of Reality* in 1966. Here the humanist paradigm--and its support of the intersubjective, or social origin of all ideas--branched into ethnomethodological and phenomenological camps (see Figure 3) and strengthened the arrival of a new hermeneutic or ethnographic approach in comparative educational studies.

The radical functionalist worldview first elaborated to explain how education functions to reproduce capitalist structures by Althusser,[19] and later by Bowles and Gintis[20] also rather quickly and effectively mounted a telling critique of structural functionalist explanations of educational change and modernization efforts. Carnoy documents the subsequent appearance in the early 1970s of a variety of neo-Marxist texts rooted in the historical materialist worldview as early examples of such paradigm clash.[21]

During the 1970s and 1980s texts drawing on Marxist radical functionalist counter-orthodoxy greatly increased in number and influence and produced a powerful critique--if not a successor paradigm--to entrenched Durkheimian and Parsonian structural functionalism and its variants in modernization and human capital theories. But, because earlier traditional Marxist-Leninist texts portray education as a repressive state apparatus, they paid little attention to how education might contribute to a revolutionary socialist strategy. By the 1970s, as Carnoy has shown, neo-Marxist researchers gave this latter question their highest priority.

In France, Althusser's 1960s interpretations of Marx has the superstructure--including education--determined by the relations of production. The hegemony of the dominant class was seen to lie in the very relations of the means of production and directly defined the purposes and functioning of the educational system. Thus Althusser saw the educational system hyperfunctionally--i.e., it necessarily reproduced the relations of production and precluded any counter hegemonic response from educators or students.

In the U.S., Bowles and Gintis applied Althusser's theory of structural correspondence and construed the reality of American education as a direct reflection of the values and relationships of capitalist production. Attempts to reform schools without corresponding changes in the structure of production, they argued, would always fail.

In Britain, Basil Bernstein and the New Sociology of Education school of thought elaborated an eclectic neo-Marxist project, combining perspectives from Durkheim, Marx and socio-linguistics, to study educational institutions as agents of cultural transmission and reproduction. While Bernstein's story of social class influence in the classification and framing of educational knowledge is clearly tied to the radical wing of the "old" sociology of education, he also draws widely upon both the humanist--or interpretive--and functionalist worldviews. In a perceptive assessment, Karabel and Halsey concluded that the macro sociological conflict approach of the American neo-Marxists and the essentially micro-sociological interpretive studies of the British were highly complementary. Both "waged war" against the common enemies of structural functionalist theory and methodological empiricism without ever coordinating their critiques.[22]

By the early 1980s a more humanistic Marxism, or radical humanism, gained prominence in critical studies. Texts framed in this knowledge orientation drew on the earlier critical theory of the Frankfort School now led in Germany by Jürgen Habermas, in North America by Henry Giroux, and in the third world by Paulo Freíre. As a branch of this intellectual movement, numerous radical feminist texts also began to draw upon critical theory's agenda for the liberation of consciousness. Here critical theory texts use a negative dialectical argument to expose education's role in the patriarchal domination of women, much as capitalists are seen to dominate workers in Marxist texts. Kelly and Nihlen, for example, critiqued all existing comparative education texts for their silence on education's role in the reproduction of gender inequality.[23] They also presented a reflective critique of their own rigid reproduction framework and found that it too "fails both to deal with 'deviations' and chart how and when they occur or become significant." The answers, they argued, will not come from deterministic functionalist or radical functionalist analysis of structure or history, but from interpretive research rooted in the humanist and radical humanist paradigms. These worldviews will reveal how women experience and interpret education in their everyday lives, and how they come to see and resist domination by making the invisible visible.[24]

With the spread of ontological pluralism and the decentering of positivist dominance in the social sciences over the 1970s and 1980s, humanistic or interpretive research framing choices also began to appear in comparative education texts. An illustrative text by Heyman, for example, laid out an alternative ethnomethodological knowledge orientation, a rationale to replace narrow functionalist and positivist approaches with an agenda for ethnographic inquiry in the field.[25] Heyman's 1979 text contends that comparative education has not provided useful knowledge to educational planners, policy makers and reformers because of its decontextualized commitment to social "facts" (i.e., the IEA study), its narrow sole interest in functional and structural relationships (i.e., modernization and Marxist research), and its focus on reified social science indicators rather than on interaction among participants in everyday social and educational environments. Research based on the measurement of indicators as proxies for theoretically related concepts result, according to Heyman, in a gross distortion of the very social reality that comparativists seek to reveal and understand. His heterodox argument builds upon Garfinkel's work of the 1960s and calls for the replacement of all positivist and materialist methods with interpretive approaches claimed to be better able to observe, describe and interpret the "reality" of our daily existence. Ethnomethodology, i.e., the study of how individuals engage in reality-making processes, is proposed because it promises to capture more of the continuous production of social reality in human interaction than do correlational studies. Correlational studies assume that objects cannot be two things at once or that objects have stable, discreet, and permanent properties--assumptions more appropriate for inquiry in the physical sciences. For Heyman, the level of analysis in comparative studies must shift from macro to micro, from an objectivist-realist to a subjectivist-relativist ontology, and to the study of everyday life. Comparative education research must stop "pretending to be scientific" and instead become microscopic, steer a heuristic course, and build its comparative interpretations and theories through replication.

In a related paradigmatic study, Clignet also rejects both functionalist and radical functionalist, or Marxist, worldviews. Despite their apparent differences, Clignet demonstrates that both paradigms share a number of weaknesses.[26] Both use effects to explain events and both stress vertical hierarchical relations at the expense of horizonal interactive relations. With their unwavering focus on structure, both ignore how assimilation and replication process performed by schools are contingent on critical sets of interaction among individuals and social groups located within the same layers of social reality. Both perspectives prevent researchers from analyzing the various mechanisms used by schools in assimilation and replication functions, and both prevent researchers from differentiating between educational interactions and their outcomes in students' life chances. Instead, Clignet looks to behavioral science and proposes a biological or psychological framework that distinguishes the perspective of each individual organism and differentiates its modes of adaption to the environment--in this case, the school environment of teachers and students. This ecologistic approach rejects the notion of universal viability found in functionalist and critical arguments. Instead, it starts at the micro level with biographies of individual actors and analyzes the relationship between educational structures and actions. It sees local adaptation and differentiation as an integral part of social reality, and necessary to historically and culturally contingent strategies if change efforts are to be effective. Accordingly, Clignet argues, the failure of most educational change policies and human capital planning efforts follow from their rigid and uniform top-down pedagogical treatments that "reflect ideological rather than scientific principles." By the mid-1980's all claims to foundational knowledge in the field had become vulnerable to this attack.[27]

The first summary examination of texts seeking to reveal and "map" paradigmatic and theoretical perspectives in the field appeared in 1977. My phenomenographic typing of how the international educational reform literature explained reform efforts and outcomes produced a heterodox, or bipolar, juxtaposition of texts framed in either equilibrium or conflict worldviews.[28] Reform explanations linked: a) the evolutionary, functionalist and systems ways of seeing with the equilibrium pole, and b) the Marxist, cultural revitalization, and anarchistic/ utopian ways of seeing educational reform to the conflict pole. As texts offering interpretivist, feminist, or problem-approach explanations of educational reform process and outcomes had yet to appear in reform discourse, they were absent from the summary figure. This would not be the case today. As may be seen in Figures 1 and 2, the consequences of subsequent branching and pragmatic entwinement of functionalist, critical and interpretivist knowledge perspectives and the emergence of radical hermeneutic critique and explanation, as especially evidenced in many feminist texts, is clearly apparent and burgeoning.[29]

By the mid 1970s, Anderson somewhat qualified his earlier strong advocacy of a totalizing and hegemonic structural-functionalist approach to comparative education. In response to attacks from advocates of competing holistic-interpretive and critical perspectives, he cautioned that confusion and "vulgar functionalism" indeed arise when investigators "too readily infer ostensible functions of schools from putative societal needs" rather than from strict adherence to "confirmation of many a priori hypotheses" concerning complex matrices of variables explaining functional equivalents among the educational practices of different systems. Despite some pessimism about the state of the art in comparative education, Anderson predicted continued progress in the identification of "functional equivalents for the basic structures and functions of educational systems." He admonished, however, that the price of "progress" would require the exclusion of competing paradigms: "Perhaps, we should cease to speak of society as a 'seamless web' and see it rather as a matrix of .5 correlation coefficients. Accordingly, holistic conceptions of society should be espoused with heavy qualifications, even when we would do not put conflict at the center of our conceptual scheme."[30]

Emergent Heterogeneity

Representations of knowledge in comparative education texts began a shift away from heterodoxy and paradigm clash in the late 1980s.[31] While a few researchers still claim orthodox purity and remain within their exclusive paradigmatic utopias--and some continue unsuccessful partisan efforts to replace one worldview with another--the collapse of grand theory in the social sciences means that no one knowledge community can now claim a monopoly of truth.[32] Rather, a growing number of researchers see all claims to universal, foundational knowledge--be they positivist "science," or interpretivist "science," or Marxist "science"--as incomplete and problematic.[33]

Husén pointed the way past heterodoxy with his recognition that no one paradigm can answer all questions, that all serve to complement disparate worldviews.[34] I too see the field moving from paradigm wars to a global terrain of disputatious yet interactive and often complimentary communities as the use of knowledge becomes more eclectic and reoriented by new ideas and new knowledge constructs flowing from a variety of cultural study approaches in, for example, interpretations, simulations, translations, probes, and conceptual mapping.[35] Knowledge has become more "textual." It is increasingly seen as construction employing a conventional sign system where even non-book texts such as architectural structures, musical compositions, or graphic texts such as maps are seen to "presuppose a signifying consciousness that it is our business to uncover."[36] With the appearance of post-structural and post modern studies, comparative education discourse has also begun this excavation[37] with a shift in knowledge framing from traditional social science and Marxist science models to perspectives of the interpretive humanities and linguistics.[38]

Discourse Communities Today

Functionalist/Neo-Functionalist

Neo-functionalist theory has seen the growth of numerous vital new branches while the traditional structural-functional root paradigm continues to come under heavy attack from all quarters. Humanist texts, for example, critique functionalism's "anti-individualism" and "downward conflation" where a supposedly integrated cultural system is seen to create a consensus that engulfs the social and personality systems. Radical functionalist texts attack its "conservatism," "idealism," and willingness to accept structured inequality and human misery as the price of social order, efficiency, and homeostasis, or moving equilibrium. Neo-functionalist texts seek to address and move beyond these problems by synthesizing core paradigmatic assumptions with opposing paradigms and other theoretical traditions.

Modernization theory also has several branches. The evolutionary functionalist branch draws heavily on Durkheim and Parsons to explain how increasingly complex and differentiated societies and educational systems create a need for mass schooling. Interventionist attempts to modernize Third World educational systems using top-down planning and innovation based on idealized western economic models and applied science are in deepening crises[39] despite efforts by the World Bank and other international agencies claiming to improve efficiency and productivity.[40] Texts here have for the most part remained closed for decades to the many lessons of an often failed practice.[41]

Neo-functionalists retain Parsons' unflinching logocentrism (i.e., a belief in reason as the controlling principle in the universe) and general social system perspective while opening their texts somewhat to rational actor approaches and interperative perspectives; to conflicting social and cultural factors in educational planning and reform projects (but only at the project level);[42] and to a recognition of the centrality of structured inequality and interest group conflict in explanations of failed educational reform.[43] In Germany, Luhmann argues that the Western type of modern society differentiates subsystems to produce both scientific theories and theories of systemic self-reflection[44]. Framing their story of national educational knowledge patterns in Germany and France in this post-Parsonian perspective, Schriewer and Keiner find a marked "German" preference, or consensus favoring a "hermeneutic-reflective style." The "French" they contend, prefer a "science of education style." Today, these two research orientations have begun, but only barely, to converge. Perspectives that are outside of their gross "either--or" dichotomy are ignored and thus made invisible, a continuing acceptable practice in functionalist discourse.

Rational choice theory seeks to move action theory away from the macro system level and back towards the actor and possibilities for human agency and more contingent understanding. The leading branch draws upon game theory and empirical analysis to explain how actors predictably interpret and act in social change situations.[45] Rational choice theory is undergoing rapid growth as both neo-functionalists and neo-Marxists now seek to put into place an empirical base of rational choice micro theory to support a diverse variety of macro theoretical constructs. Coleman especially has contributed to the development of a broader action theory which synthesizes interests in actors and systems to clarify the meaning of voluntaristic action.[46] Analytical Marxists as well now freely borrow from rather conservative rational choice and game theory--and even from general equilibrium theory and neoclassical economics--to elaborate the empirical micro grounding of what their radical texts see as macro-social historical materialist processes.[47]

Conflict theory examines symbolic codes and culture-mediated power relations. It draws on both functionalist and macro-historical sociological theory to explain education in contexts of privilege, domination, and cultural reproduction. Building on paradigmatic texts by Weber, Simmel, Dahrendorf, and Collins, conflict theory focuses on the structure and consequences of conflict within social and educational systems. In Europe, the cognitive focus is most often on structuralist theories that treat symbolic codes largely as classification systems. These texts emphasize the rationality of symbolic codes within formal systems of knowledge, and as with Bourdieu and Passeron, often attempt to "de-center" the agency of code production. American and British approaches, in contrast, tend to focus more on the codes themselves.[48] Archer for example, presents a "morphogenetic" explanation where mutual causal processes are seen to counteract systemic stress and to facilitate structural differentiation and increased information flow.[49] Texts emphasizing conflict theory willingly incorporate Marxist ideas,[50] yet reject historicism and see only continued conflict into the future.[51] With its predilection for methodological eclecticism and micro-macro interaction, conflict theory, as in the work of Pierre Bourdieu and Randall Collins, is becoming increasingly attractive as a perspective to study how changing stratification and organization structures are grounded in the interactions, structures, and intersubjectivity of everyday life.

Radical Functionalist/Neo-Marxist

While the sort of traditional Marxist structural determinism associated with Althusser's and Bowles and Gintis' texts of the 1970s has now largely disappeared, neo-Marxist and post-Marxist theory continues--if in something of a state of shock following the collapse of socialist theory and practice in Eastern Europe, in the former USSR, and in much of the Third World. Anticipating this change to some extent, a text by Bowles and Gintis in 1986 moved far beyond the earlier radical functionalist model of social class reproduction and sought to privilege a new post-Marxist theoretical discourse, or "post-liberal democracy," combining features of liberalism and Marxism.[52] Carnoy and Samoff are also concerned to rid their earlier Marxist analysis of its more nostalgic and hyper-functionalist features.[53] They seek to break with orthodox Marxist social class theory and present a less deterministic neo-Marxist "transition-state theory" that emphasizes the role of the state and de-emphasizes the influence of productive forces and class conflict to explanation what they see as Third World "transitions to socialism." Yet, their perspective's inability to recognize--let alone to explain--reverse transitions from socialism to market economies in, for example, the former USSR, Nicaragua, Eastern Europe, and elsewhere gives their text a somewhat teleological cast seemingly at odds with both their findings and with recent historical events.

Radical Humanist/Critical Theory

Cultural rationalization theory also draws upon a number of what were earlier viewed as ideologically incommensurable perspectives.[54] Habermas, the leading theorist in this community, has proposed an ambitious reconstruction of Marx's grand emancipatory narrative. Rejecting both utopian historicism and the endless negative dialectics of the earlier Frankfort School--while continuing to wear his logocentrism on his sleeve, Habermas now seeks a neo-normative foundation in undistorted language communication. Moving toward the pragmatic center, he finds useful bases for cultural reconstruction in linguistic theory, in Mead's intersubjective theory of communicative democracy, in Weber's theories of bureaucracy and progressive cultural rationalization, and in Parson's action theory.[55]

Critical theory, the main branch growing out of radical humanism, has in its many forms been a leading contender over the past several decades of paradigm conflict. It is closely related to cultural rationalization theory but is more normative and directly attacks the repressive character of western reason, culture and society. Marcuse and Freire have, perhaps, most directly influenced comparative educators' use of this perspective in their advocacy of emancipatory modernity and a revolutionary subject variously resisting domination by the world capitalist system,[56] distorted knowledge relations[57]--or among the feminists--oppressive gender relations.[58] A vital and growing variation of this theoretical framing perspective drawing upon Horkheimer's negative dialectics is also found in several recent critical ethnographic studies. They offer thick descriptions of cultural and economic domination and examine prospects for resistance--supposedly from the actor's viewpoint.[59]

Examples of post-structuralist and post-modernist theory in comparative education texts are as yet few in number. With their variety and resistance to representation, texts infused with post-modern sensibility are also the most difficult to categorize and map. For the most part rooted in both the humanist and radical humanist paradigms (see Figure 2) they focus on cultural codes and reject all meta-narratives (i.e., grand theories), determinism, and universals. They also reject the truth claims of positivist science, of history, and of classical rationalism (i.e., the notion that one can rank knowledge claims according to intuitive truth standards).[60] Instead, the social world is usually portrayed as a collage of blurred genres, of multiple narratives--or, if you will, traces tied to specific forms of empowerment as suggested in Figure 2 following. The time of total relativity is seen to be present everywhere. Post-modern texts attack everything that claims to be free of contradiction, closed, uniform or unequivocal. These claims are usurped by paradox, diversity, ambiguity, and chance.[61] Post-modern deconstruction annihilates stable spaces and permanent boundaries at all levels of reality in a continuous circulation of information. Space is no longer in geography, as in modernist views, but now it is in electronics. And unity is only in the terminals, or nodes. From this perspective's extreme relativism, both society and values tend to disintegrate and post-modern hyperspace creates spatial and social confusion. According to Jameson, it undermines our ability to grasp our positions as individual and collective subjects, and to locate ourselves so as to be able to act and struggle. Science shifts from attempts to discover Truth to the creation of new ideas and a preference for paralogy--i.e., a type of counter-logical analysis. In redefining educational goals, the post-modern perspective avoids the imposition of normative decisions and looks instead to a better understanding of the power relations between various information grids in which education occurs, to local knowledge, to "decentralized small units," and to making the invisible visible.[62]

From the post-modern perspective, the electronic and telecommunication revolutions give a new prominence to language and post-modern science turns to language games as the minimum relation required for society to exist. Where modernist science permits only the single linear language game of denotation and progress, post-modern "science" favors a "pragmatics" of language game. As in traditional or pre-modern narrative, the positions of speaker, listener, and referent of the narratives are more fluid and interchangeable. Society is seen to be reproduced in a circular, face-to-face fashion. From the post-modern perspective, the discourses of positivist and Marxist science become, for example, just more language games incapable of legitimating, or delegitimating, the other language games. The post-modern perspective rejects the modern belief that theory mirrors reality. From its perspectivist and relativist positions, it contends that, at best, theories provide only partial perspectives on their objects, that all cognitive representations are mediated by language, culture, and history. The notion of totalizing macroperspectives, i.e. paradigms, is rejected in favor of microtheory and a micropolitics that challenges a broad array of discourse and institutionalized forms of power.[63]

It seems likely that post-modern theory with its difficult and provocative new ideas has potential to occupy some of the space vacated by the collapse of modernist grand theories, especially structural-functionalism with its notions of consensus and causality, and Marxist structuralism with its tired global philosophy of the subject and its vision of social evolution as destiny. Instead, post-modern perspectives reject modernity as a historical movement toward control based on foundational knowledge and replace rationality and logic with paralogy, or counter logic, and a concern to allow all to speak and enter the terrain of social agonistics. Its decentering and anti-foundational perspective links power with knowledge and, reflexively, even views emancipatory moral rhetorics as merely another of the forms assumed by power.[64]

Since the beginning of the nineteenth century, comparative education texts have made valuable contributions to understanding educational relations in earlier stories of transformations to capitalism, urbanism and political democracy. Today, with the reinscription and transformation of modernity, post-structural and post-modern ways of seeing offer comparative educators timely yet challenging new perspectives in attempts to theorize the present into as yet unknown educational and cultural patterns.

Humanist/Interpretivist

The pragmatic-interactionist orientation in comparative education texts also rejects totalizing theory and favors interpretive method in attempts to understand how social actors come to consciousness within social structures. It has sought to determine through a better understanding of knowledge in practice and community which perspectives have pragmatic i.e.,

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operational and heuristic value.[65] Drawing upon Dewey and Mead--and more recently on neo-pragmatic texts by Habermas and Rorty--pragmatic interactionism offers an intersubjective central space where all paradigmatic perspectives might overlap (see Figure 2), where all worldviews and ways of seeing might interact in the context of a contingent educational change practice, and a pragmatism that claims to be open to difference.[66]

Equally central to the humanist paradigm, the ethnographic perspective favors local knowledge and interpretation over totalizing paradigmatic constructs and modernization agendas for progressive change. In comparative education, this perspective has, for example, been used to describe participant perception of classroom experiences among poor Latin American students[67] and patterns of academic persistence and achievement among immigrant and "involuntary minority" children.[68] While the ethnographic perspective claims to provide description of how ethnic groups and others view and interpret educational practice, ethnographic data as "thick description" have little if any comparative value without the imposition of an ethnological or ideological comparative overlay.[69]

Accordingly, neither Heyman's proposal to replace positivism with ethnomethodological method nor Clignet's call for an exclusive phenomemological approach to comparative education has as yet garnered much support. But with the field now entering a stage of eclectic critical post-positivism, the humanist paradigm with its focus on culture, creativity and emotion is combining with other perspectives in the void left by the deconstruction of the scientific functionalist and the emancipatory grand meta-narratives. Here, phenomenography, or narrative-dependent content, as well shows promise in recent efforts to map increasingly diverse cultural clusters and knowledge communities now interacting within the dynamic intellectual field of comparative and international education texts.[70]

Phenomenography is about the qualitatively different ways in which people experience or think about various phenomena, about the relations between human beings and their world. In comparative education, phenomenographic studies have sought, as in this work, to characterize how researchers see, apprehend, and think about knowledge constructs such as "paradigms and theories" at different times and in different knowledge cultures and subcultures. Through empirical studies as well as textual analysis, phenomenographic studies seek not to describe things "as they are," but how they have been presented as sedimentations of ways of thinking about the world.[71] Categories of description identified in phenomenographic research are seen as a form of discovery and as the main outcomes of such inquiry. Comparison of alternative perspectives seeks to identify distinctive characteristics or essential structures of each conceptualization, as in this discourse analysis, so they may be made visible, described and mapped.[72]

Mapping Knowledge Perspectives

Earlier examples of mapping knowledge perspectives in comparative and international education texts can be seen in Anderson, where implicitly structural functionalism orthodoxy occupied all space; in Paulston, where polarized equilibrium and conflict paradigms enclosed equal space; in Epstein, where three distinct and supposedly incommensurable and irreconcilable paradigms labeled "neo-positivist," "neo-Marxist," and "neo-relativist" contested space; in Adams' presentation of a multidimensional typology; and in the more interactive "maps" presented in this study.[73] Maps are a distinct mode of visual representation that use space to represent space. They offer, when combined with discourse analysis, a system of possibility for new knowledge. All maps contrast two interdependent planes of reality--the ground or territory to be mapped, and the map of the territory. Accordingly, any map is a construct, a conceptual configuration that has been thematized, abstracted and lifted from the ground to another plane of meaning. Topographic maps, for example, reinscribe a place, or "analysis situs," on a flat map surface. In similar fashion, post-modern cognitive maps--as presented here--reinscribe and structure ways of seeing social and educational phenomena embedded in the semiotic space of literary texts and the intertextual space of educational practice.

In Figure 2, paradigms and theories in the field of comparative education have been identified with the use of textual analysis and are presented in topological fashion in a discourse field with four paradigmatic "nodes" and four theory "basins." Textual dispositions regarding social and educational change (the verticle dimension) and characterization of reality (the horizontal dimension) are the coordinates used to topologize, or give form--albeit fuzzy--to textual orientations within the field. Arrows are use to indicate genealogy and the directions of knowledge relations. Several advantages of the figure may be noted. It facilitates, for example, a reinscription and resituation of meanings, events and all claimant knowledge communities in an open field. It suggests a dynamic and rhizomatic field of tangled roots and tendrils. Comparative education is now portrayed as a mapping of the intertextual weavings of diverse discourse communities rather than the objectified images presented to the world in earlier foundational texts. The strength of social theory in the field today is in fact firmly

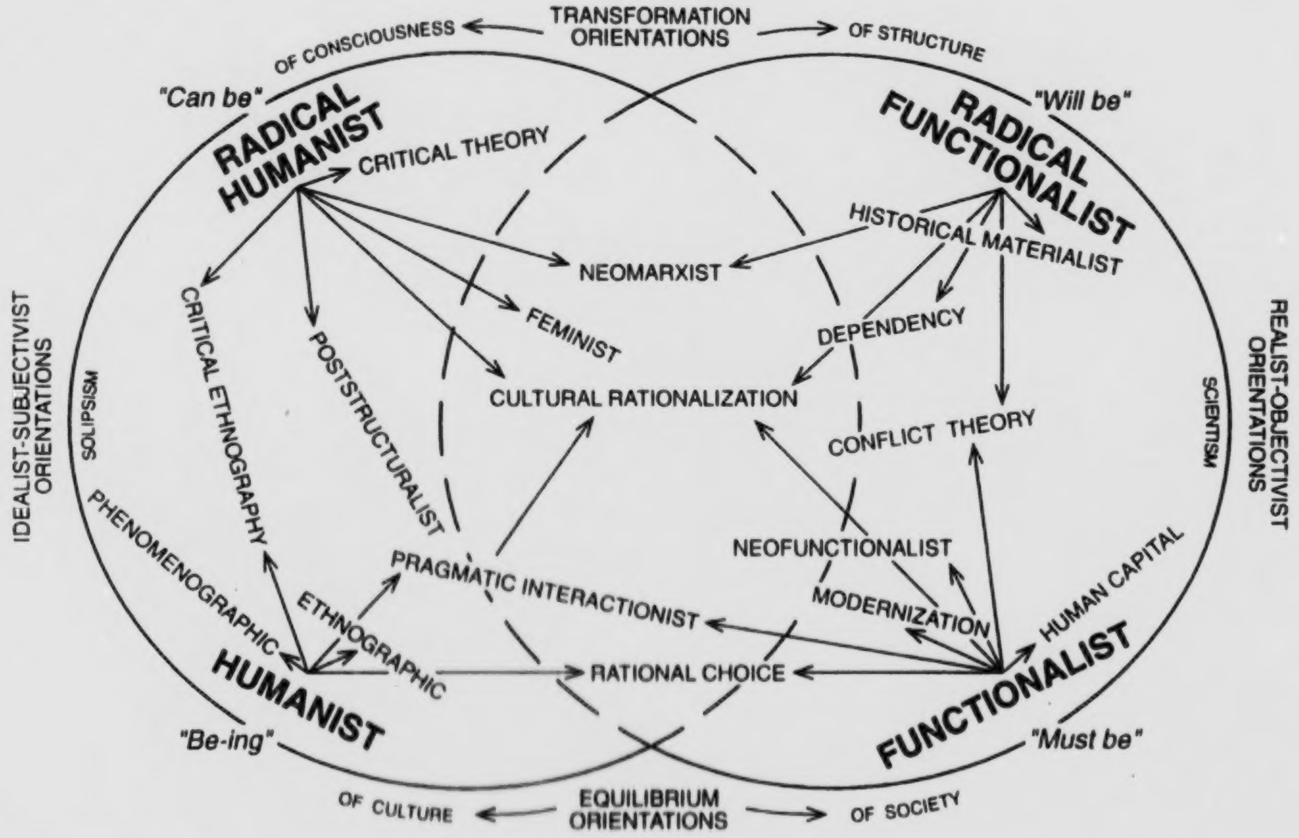

Figure 2. **A meta-discursive mapping of discourse communities in recent educational change studies. This post-modern map opens to all claimants space for inclusion in the intellectual field and social milieu.**

grounded in this very multiplicity of its perspectives and tools known through intertextual composition. Simultaneously, in the shaping and interrelating of knowledge communities, and relations, Figures 1, 2, and 3 introduce into complex systems a fleeting representation of their own complexity, and help new discourse communities find space and voice both on the map and the agonistic field.[74]

The paradox here is that conceptual mapping can create both distorted authoritarian images, as well as new tools to challenge orthodox boundaries and the epistemological myth of cumulative scientific progress. Maps also will vary depending on the mapper's textual orientation and the topological format chosen. With computer technology, cognitive mapping becomes an ongoing, rapidly changing process. Flows of information "can now stake out claims on expanses of pure space in which bodies of knowledge have displaced human bodies and on which all boundaries are tenuous."[75] Today, social cartography offers comparative educators a valuable tool to capture text and context, to transfer the rhetoric and metaphor of texts on to cognitive maps, and to open a way for intertextuality among competing discourses.[76] And when it suits our purposes, maps can also provide a way to see all knowledge thoroughly enmeshed in the larger boundary disputes that constitute our world. Here post-modern social cartography is a critical practice as it questions all inclusions and exclusions, demystifies rhetoric (including its own), and interprets discourse as a site and object of struggle where different groups strive for hegemony in the production of meaning and ideology. By giving structure to new ideas, Fox Genovese contends, cognitive mapping can serve as a means of counterhegemic boundary setting needed to break down unjust established boundaries. In total contrast, Deluze and Guttari argue that all boundary setting leads to hierarchy and eventual oppression. They contend that boundaries must be constantly contested by what they call "nomads," or militants advocating partial perspectives that resist all demands to globalize or hierarcize.[77] I come down somewhere in between these opposing positions and favor a more contingent view of boundary making as a basis for critical post-modern cartography. In this way, provisional mapping can also be practical. It can provide individual and community orientation to and in practice, and it can help us see and inscribe proliferating knowledge communities producing an ever expanding textual discourse.[78]

Figure 3 below presents such a textually derived meso mapping of paradigmatic worldviews and theoretical perspectives entering into and intertwined in a specific educational reform practice. This visual representation, in contrast to Figure 2, describes a specific national

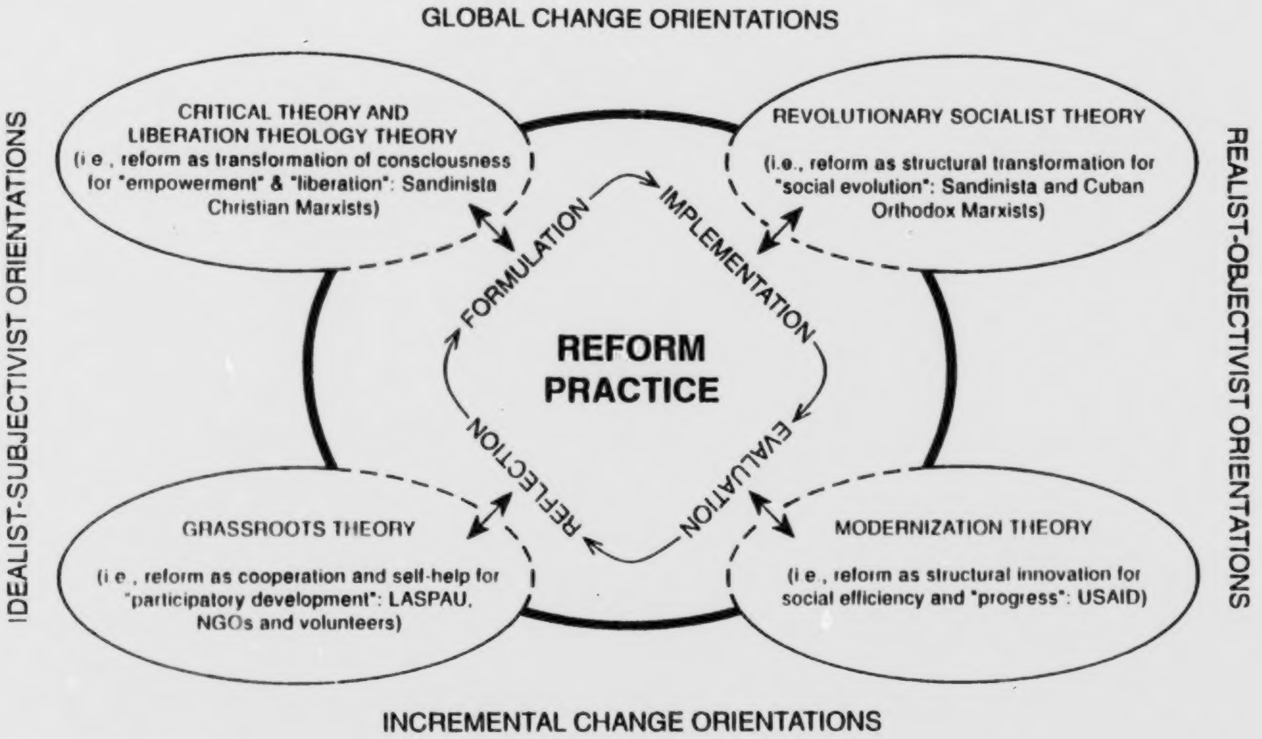
GLOBAL CHANGE ORIENTATIONS
IDEALIST-SUBJECTIVIST ORIENTATIONS
REALIST-OBJECTIVIST ORIENTATIONS
CRITICAL THEORY AND LIBERATION THEOLOGY THEORY
(i.e., reform as transformation of consciousness for "empowerment" & "liberation": Sandinista Christian Marxists)
REVOLUTIONARY SOCIALIST THEORY
(i.e., reform as structural transformation for "social evolution": Sandinista and Cuban Orthodox Marxists)
FORMULATION
IMPLEMENTATION
REFORM PRACTICE
REFLECTION
EVALUATION
GRASSROOTS THEORY
(i.e., reform as cooperation and self-help for "participatory development": LASPAU, NGOs and volunteers)
MODERNIZATION THEORY
(i.e., reform as structural innovation for social efficiency and "progress": USAID)
INCREMENTAL CHANGE ORIENTATIONS

Figure 3. **A meso mapping of social and educational change perspectives discovered in Nicaraguan higher educational reform discourse.**

Source: Paulston & Rippberger (1991): 194

educational change practice at a particular time and place–i.e., in Nicaraguan higher educational reform efforts in the early 1980's. It begins to suggest how ideas and social practices interconnect. Here practice is viewed as a hermeneutic circle where four major stakeholder groups in the reform practice bring their guiding worldviews, cultural codes and purposes into a goal oriented interactive educational change process.[79] Where Figure 3 suggests actors, behavior and accomplishments within the context of everyday life, Figure 2, offers a systemic juxtaposition of the sources of intellectual energy identified in paradigmatic exemplars and the interaction of theoretical perspectives. With such perspectivist maps of various levels of the micro-meso-macro continuum, educational policy researchers can now move beyond modernism's arbitary dichotomies and absurd oppositions to situate themselves within the multiple levels of reality in which they are players. And by becoming mappers, they will help to make educational studies a more reflexive and spatial field whose subject matter increasingly encompasses itself. They can also gain what Bourdieu sees as "an extraordinary autonomy, especially when you don't use it [i.e., cognitive mapping] as a weapon against others, or as an instrument of defense, but rather as a weapon against yourself, as an instrument of vigilance."[80]

Conclusion

This study has used discourse analysis and phenomenographic method to examine the weave of discourses and practices about educational change in comparative and international education texts over time as bricolage–i.e., as historically locatable assemblages of cultural codes and practices; and as cognitive maps spacing discursive formations and ways of thinking at macro and meso levels of social reality. Three major textual orientations to knowledge in the field are identified as the orthodox, the heterodox, and the emerging heterogeneous. Relations between discourse communities today are also identified and discussed noting that comparative educators and their texts are becoming more reflexive and eclectic thus allowing new ideas and new mapping opportunities to emerge from the reinscription of earlier theories and the changing spatial relations of our time.

ENDNOTES

1J. Smith, *Mystical Rhetoric* (London, 1657): 150.

2R. Rorty, *Contingency, Irony and Solidarity* (Cambridge: Cambridge University Press, 1989): 135.

3D. Weinstein and M.A. Weinstein, "Postmodernizing (Macro) Sociology." *Sociological Inquiry*, 63(1993): 224-225.

4An explanation of Bourdieu's interactive field of power, see his "Social and Symbolic Power." *Sociological Theory* 7(1989): 14-25. Bourdieu's mapping rationale argues that social and intellectual worlds may be uttered and constructed in different ways according to different principles of vision and division, that failing to construct the space of positions leaves you no chance of seeing the point from which you see what you see. And because the struggle over boundaries and classifications such as maps is a fundamental dimension of class struggle, "to change the world one has to change the ways of world making, that is, the vision of the world and the practical operations by which groups are produced and reproduced" (p. 23).

5R. Barthes, "From Work to Text" in *Textual Strategies: Perspectives in Poststructural Criticism*, ed. J. Hariri, (Ithaca: Cornell University Press, 1979): 48-63. Barthes argues that textual understanding is related to social and political understanding. Where modernist science has traditionally viewed language as a transparent instrument or tool devoid of ideational or practical content, literary theory sees language as opaque and seeks to penetrate this opacity in order to recover the commitments and practices contained in language. My choice has been to see this reading as mythic. See P. Ricoeur, "The Model of the Text: Meaningful Action Considered as a Text," in *Interpretive Social Science*, eds. R. Rabinow and W. Sullivan (Berkeley The University of California Press, 1979):73-102. Others have see readings as "violent" (Foucault), "social" (Liebman), "political" (Jameson), "rhetorical" (Gadamer), or "ludic" (Baudrillard). These and other orientations to textual exegesis are examined in M Shapiro, "Literary Production as a Politicizing Practice," in *Language and Politics*, ed M Shapiro (New York: New York University Press, 1984): 215-254.

6G. Olsson, "Invisible Maps: A Prospectus," *Geografiska Annaler* 73(1991): 91.

7Illustrative texts of the 1950s and 1960s subjected to analysis are: D. Adams and J. Farrell, "Societal Differentiation and Educational Differentiation," *Comparative Education* 5 (1959): 249-262; C. Anderson, "The Methodology of Comparative Education," *International Review of Education* 7 (1961): 1-23; G. Bereday, *Comparative Method in Education* (New York: Holt, Reinhart and Winston, 1964); T. Husén, ed., *International Study of Achievement in Education: A Comparison of Twelve Countries*, (Stockholm: Almquist and Wiksell, 1967); H. Noah and M. Eckstein, *Toward A Science of Comparative Education* (New York: Macmillan, 1969); and T. Schultz, "Education and Economic

Growth," in *Social Forces Influencing American Education*, ed. N. Henry, (Chicago: University of Chicago Press, 1961: 46-88.

Texts from the 1970s and 1980s are C. A. Anderson, "Comparative Education Over a Quarter of a Century: Maturity and Challenges," *Comparative Education Review* 21 (1977): 405-416; P. Bourdieu and J. Passeron, *Reproduction: In Culture, Education, Society* (Beverley Hills: Sage, 1977); S. Bowles and H. Gintis, *Schooling in Capitalist America* (New York; Basic Books, 1976); M. Carnoy, "Marxism and Education," in *The Left Academy: Marxism On American Campuses*, eds. B. Ollman and E. Vernoff (New York: Praeger, 1984): 79-98; R. Clignet, "The Double Natural History of Educational Interactions: Implications for Educational Reforms," *Comparative Education Review* 25 (1981): 330-352; E. Epstein, "Currents Left and Right: Ideology in Comparative Education," *Comparative Education Review* 27 (1983): 3-29; R. Heyman, "Comparative Education From An Ethnomethodological Perspective," *Comparative Education*15 (1979): 241-249; T. Husén, "Research Paradigms in Education," *Interchange* 19 (1988): 2-13; J. Karabel and A. Halsey, eds., *Power and Ideology in Education* (London: Oxford University Press, 1977); G. Kelly and A. Nihlen, "Schooling and the Reproduction of Patriarchy" in *Cultural and Economic Reproduction in Education*, ed., M. Apple (London: Routledge and Kegan Paul, 1982: 162-180; and R. Paulston "Social and Educational Change: Conceptual Frameworks," *Comparative Education Review* 21 (1977): 370-395.

Texts from the 1990s are P. Altbach, "Trends in Comparative Education, "*Comparative Education Review* 35 (1991): 491-507; R. Cowen, "The National and International Impact of Comparative Education Infrastructures," in *Comparative Education: Contemporary Issues and Trends*, ed. W. Halls (Paris: UNESCO, 1990); P. Lather, *Getting Smart: Feminist Research and Pedagogy Within the Post--Modern* (London: Routledge, 1991); V. Masmann, "Ways of Knowing: Implications for Comparative Education," "*Comparative Education Review* 34 (1990): 465-473; R. Paulston, "Comparative and International Education: Paradigms and Theories" In *International Encyclopedia of Education* (Oxford: Pergamon Press, 1993); R. Paulston and M. Tidwell, "Latin American Education--Comparative" in *The AERA Encyclopedia of Education* (New York: McMillan, 1992); V. Rust, "Postmodernism and Its Comparative Education Implications," "*Comparative Education Review* 35 (1991): 610-626; N. Stromquist, "Gender Inequality In Education: Accounting for Women's Subordination," *British Journal of Sociology of Education* 11 (1990): 137-154; H. von Recum, "Erziehung in der Post-moderne" (Education in the Postmodern Period), *Die politesche Meinung* 237 (1990): 76-93.

[8] E. Gottlieb, "The Discoursive Construction of Knowledge." *International Journal of Qualitative Studies in Education*, 2(1989): 131-132.

[9] Anderson, *International Review of Education*, p. 11.

[10] Bereday, *Comparative Method*, pp. 4-9.

[11] Noah and Eckstein argue for a combination of E. Nagel's logical positivism and K. Popper's hypothesis testing approaches. See their Ch. 10, "Scientific Method and Comparative Education" pp. 112-122.

[12] See, for example, Rorty, Chapter Three where he argues that thinkers such as Nietzsche, Freud and Wittgenstein have along with Dewey enabled societies to see themselves ironically, as historical contingencies, rather than as expressions of underlying, a historical human nature or as realizations of suprahistorical goals. For an influential critique of positivism by this author, see his *Philosophy and the Mirror of Nature* (Princeton: Princeton University Press, 1979).

[13] Husén, *International Study of Achievement in Mathematics*, pp. 2, 71-72.

[14] Adams and Farrell, p. 257.

[15] *Ibid*, p. 261.

[16] N. Wiley, "The History and Politics of Recent Sociological Theory," in *Frontiers of Social Theory: The New Syntheses*, ed. G. Ritzer (New York: Columbia University Press, 1990), 392-416.

[17] S. Klees, "The Economics of Education: Is That All There Is?" *Comparative Education Review*, 35(1991): 721-734.

[18] The emergence of a global comparative education field is well documented in *Emergent Issues In Education: Comparative Perspectives*, ed., R. Arnove, P. Altbach, and G. Kelly (Albany: SUNY Press, 1992), Passim.

[19] Althusser, *Philosophy and the Spontaneous Philosophy of the Scientists* (London: Verso, 1990). See especially pp. 1-42, "Theory, Theoretical Practice, and Theoretical Formation" where Althusser's deterministic structural reproduction arguments from the 1960s are reprinted.

[20] Bowles and Gintis, pp. 132-134, 195-199, and 208-211.

[21] Carnoy, pp. 83-87.

[22] Karabel and Halsey, p. 71.

[23] Kelly and Nihlen, pp. 162-163.

[24] See, for example, S. Star "The Sociology of the Invisible," in *Social Organization and Social Process*, ed. D. Maines (New York: Aldine De Gruyter, 1991): 265-283.

[25] Heyman, pp. 241-243.

[26] Clignet, pp. 331-334.

[27] Paulston, *Social and Educational Change*, pp. 371-374; and Epstein, pp. 3-6.

28See Paulston, *Ibid*, pp. 372-273, 28.

29See Masemann; Lather; and *interalia*, N. Stromquist, "Determinants of Educational Achievement of Women in the Third World," *Review of Educational Research* 59(1989): 143-183.

30Anderson, "Comparative Education Over A Quarter of A Century," p. 413. R. Lawson made the first major pluralist counter-attack on attempts by Anderson and his students to enclose the field in functionalist logic and scientistic methods--i.e., the "Chicago Orthodoxy." In his heretical 1975 presidential address, "Free-Form Comparative Education" *Comparative Education Review* 19 (1975): 345-353. Lawson opposed "the application of a political religion to social science," the denial of legitimate opposition, and the enclosure of all scholarly activity within an orthodoxy of narrow political parameters (pp. 345-346).

31Altbach, *Trends in Comparative Education*, pp. 504-506. For a continuation of this movement, see Paulston, "Ways of Seeing," pp. 177-202.

32See the debate in "Colloquy On Comparative Theory" *Comparative Education Review*, 34(3) (1990): 369-404.

33See also Rust, pp. 614-616.

34Husén, pp. 10-12.

35Paulston, *Comparative and International Education*, pp. 254-255.

36R. Barthes, p. 61. M. de Certeau claims, in this regard that ". . . narrative structures have the status of spacial syntaxes," that all discourse suggests a positioning in space, and that such imaginary spatial trajectories invite comparison. I would also argue for a conceptual mapping that links the concept-metaphor of textuality with the provisional structure of topography. From this view, texts communicate not only an order of signs (i.e., semiology), but have validity for a more philosophical portrayal of the "experience of space" (i.e., in cognitive mapping) as well. See M. de Certeau, *The Practice of Everyday Life* (Berkeley: University of California Press, 1984; and B. Bartolovich, "Boundary Disputes: Textuality and the Flows of Transnational Capital." *Meditations* 17(1992): 27.

37See C. Cherryholms, *Power and Criticism: Post-Structural Investigations in Education* (New York: Teachers College Press, 1988); von Recum, pp. 12-16; and Rust, pp. 622-624; and M. Liebman and R. Paulston, Social Cartography: A New Methodology For Comparative Studies. Paper presented at the AERA Annual Meeting, New Orleans, April 4-8, 1994.

[38] For influential examples of earlier postmodern turns in anthropology and cultural geography respectively, see J. Clifford and G. Marcus, eds. *Writing Culture: The Poetics and Politics of Ethnography* (Berkeley: University of California Press, 1986; and T. Barnes and J. Duncan, eds. *Writing Worlds: Discourse, Text, and Metaphor in Representations of Landscape* (London: Routledge, 1992).

[39] For an argument that economists and their "crassly materialistic view of education" and "treatment of schools as manpower factories" helped to produce development education failures, see Coombs, pp. 14-20.

[40] Schultz, "Investment in Human Capital," pp. 4-13 and Schultz, "Investing in People," pp. 219-223.

[41] Klees, pp. 731-733 and J. Lauglo, "Vocational Training and the Bankers' Faith in the Private Sector," *Comparative Education Review* 36 (1992): 227-236. From a critical pragmatic perspective, Lauglo critiques World Bank efforts to train human resources for modernization projects as biased in favor of neo-classical economics and the private sector, as "too narrow to suit changing conditions." In the Bank's operational work "They come in and . . . tell you what you need." Their view of change is evolutionary and unilinear. Their theoretical orientation is eurocentric, lacking in cultural sensitivity, and comes across "as ideological (or as aloof economic theorizing) rather than rooted in experience" (p. 232).

[42] Rondinelli, et al., pp. 53-63.

[43] Plank, pp. 557-559.

[44] See N. Luhmann, "The Paradox of Systems Differentiation and the Evolution of Society" in *Differentiation Theory and Social Change: Comparative and Historical Perspectives*, eds. J. Alexander and P. Colony (New York: Columbia University Press, 1990): 63-91 and J. Schriewer and E. Keiner, "Communication Patterns and Intellectual Traditions," *Comparative Education Review* 36 (1992): 25-51. Luhmann's objectification of the subjective realm expands reality to include both realist and relativist world views as required by "autopoetic" or self-referential systems. From this de-humanized and totalizing perspective, actions are not seen to be produced by actor's subjective motives, but by the needs of complex systems to manage their own reproduction, i.e., to transform noise into information which keeps in motion the self-referential network of internal processes. Luhmann claims that his story of complex systems can fill all the space of knowledge, that it will put an end to controversies between positivists and dialecticians, and between scientists and humanists, See his "Insistence On Systems Theory: Perspectives From Germany." *Social Forces* 61(4) (1983): 987-998.

[45] Turner, 1987, pp. 158-163.

[46] Coleman, pp. 153-159, 170-172.

[47] See J. Elster, "Further Thoughts On Marxism, Functionalism and Game Theory," in *Analytic Marxism*, ed. J. Roemer (Cambridge: Cambridge University Press, 1986): 36-59.

[48] For an excellent review, see R. Collins, "Conflict Theory and the Advance of Macro-Historical Sociology," in Ritzer: pp. 68-87.

[49] See Archer, Chs. 6, 7 and 8.

[50] Bourdieu and Passeron, pp. 4-5, 141 and 217.

[51] Examples are to be found in, among others, Paulston, "Education As Antistructure," pp. 64-65; and Weiler, pp. 300-304.

[52] S. Bowles and H. Gintis, *Democracy and Capitalism* (New York: Basic Books, 1986): 176-213.

[53] Carnoy and Samoff, pp. 3-13, 377-380. For a sympathetic yet rigorous critique of Marxist theories of schooling, see D. Liston, *Capitalist Schools: Explanation of Ethics in Radical Studies of Schooling* (New York: Routledge Chapman and Hall, 1988). Liston sees traditional Marxist explanations trapped within a functionalist view of schools--i.e., they use effects to explain events: they lack researchable propositions, and they lack empirical assessments of radical functionalist claims. Instead, he advocates a plurality of methodological approaches to study educational change efforts with "the empirical scientific" orientation being appropriate for questions of causality within structural relations, and the "hermeneutic-interpretive" orientation appropriate to questions of cultural and personal meaning. F. Jamison has also proposed an ambitious reconceptualization of the radical structuralist perspective. His "cognitive mapping" strategy provides a conception of social totality that includes both the micro view of individual experience, and the macro view of saturated and enormously complex new international space now thoroughly penetrated by what he calls hyper-capitalism. Such maps--as yet to be created--would, he claims, have "the great merit of stressing the gap between the local positioning of the individual subject and the totality of class structures in which he or she is situated, a gap between phenomenological perception and a reality that transcends all individual thinking or experience. This ideology attempts to span or coordinate, to map, by means of conscious and unconscious representations" (p. 353). See his highly original chapter, "Cognitive Mapping" in *Marxism and the Interpretation of Culture*, eds. L. Grossberg and C. Nelson (Urbana: University of Illinois Press, 1988): 347-357.

[54] See, for example, Weiler, p. 303 and Welsh, p. 508-531. In his characterization of comparative education texts, Welsh notes the choice of a "broadly functionalist, positivistic perspective: from 1930-1970; the addition of critical and interpretive views during the 1970s; and after 1980, the use of neo-Weberian and micro-macro knowledge

perspectives as well. See his "mapping" study, "Class, Culture and the State in Comparative Education." *Comparative Education* 29(1993): 7-27.

55For an explanation of how Habermas sees Mead's social psychology as clearing "the way for a communication concept of rationality" see J. Habermas, "The Paradigm Shift in Mead: The Foundations of Social Science in the Theory of Communication," in *Philosophy, Social Theory and the Thought of George Herbert Mead*, ed. M. Aboulafia (Albany: State University of New York Press, 1991):137-168.

56Arnove, pp. 48-54.

57See P. Altbach, *The Knowledge Context: Comparative Perspectives on the Distribution of Knowledge* (Albany, SUNY Press, 1987).

58See for example, N. Stromquist's "Educating Women: The Political Economy of Patriarchal States," *International Studies in Sociology of Education* 1 (1991): 111-128; and "Women and Literacy: Promises and Constraints," *Annals, AAPSS* 520 (March, 1992): 54-65. Here feminist perspectives are brought to bear on problems of structured inequality to help make the invisible visible, and to produce valuable new knowledge.

59Foley, pp. 548-551; and Weis, pp. 11, 14-15 and 214.

60See Cherryholms, Chs. 1 and 8; and Rust, pp. 614-616.

61J. Derrida, *Speech and Phenomena* (Evanston: Northwestern University Press, 1973). The postmodern political agenda evidences a stoic bias and a paradoxical irresolution of things in the world. See, for example, the brilliant if deeply nihilistic theoretical narrative by J. Baudrillard, *Revenge of the Crystal Selected Writings on the Modern Object and Its Destiny, 1968-1983* (London: Pluto Press, 1990), and especially his nightmare vision in "Mass Media Culture," pp. 63-98.

62J.F. Lyotard, *The Differend: Phrases in Dispute* (Minneapolis: University of Minnesota Press, 1988): 20-38. Foundationalist discourse seeking to establish universals or to provide true accounts of phenomena in the world is viewed from a post-modernist perspective as nostalgia. In their style, postmodern texts reject all totalizing ambitions of modernist social science. All knowledge, both personal and communal, is to be critically examined and continually underminded through paralogical deconstruction. While postmodernism in the abstract is unescapably relativistic and nihilistic, in practice growing numbers of academics have selectively appropriated new ideas from this perspective to question our fragmenting cultural order and to retheorize modernist theories of resistance, i.e., feminism, critical theory, Marxism, dependency theory, and the like. Above all postmodernism directs our attention to problems of difference, and to the Other in a global electronic society. Ironically, it welcomes new ways of seeing, as in this chapter, and then undermines them. For a penetrating yet fairminded critique of contradictions and absences embedded in the post-modern perspective, see J. Duncan and T. Barnes, eds. *Writing Worlds: Discourse, Text and Metaphor in the Representation of Landscape* (London: Routledge, 1992): 248-253.

63S. Best and D. Kellner, *Postmodern Theory: Critical Interrogations* (New York: Guilford Press, 1991): 4-5, 170. See also R. Paulston and M. Liebman, "An Invitation to Post-Modern Social Cartography." *Comparative Education Review*, 38 (1994). Forthcoming.

64M. Foucault, *Power/Knowledge* (New York: Pantheon, 1980).

65Examples may be seen in E. King, "The Expanding Frontier of Pluralism." *Comparative Education* 19 (1983): 227-230; in his earlier study of practice, *Other Schools and Ours* 5th ed. (London: Holt, Rinehart, and Winston, 1979); and "Commentary: Observations from Outside and Decisions Inside," *Comparative Education Review* 34 (1990): 392-394. For an outstanding presentation of how critical pragmatism views educational change problems, see C. Cherryholms, "Modernity, Pragmatism, and Educational Change," in *Discourse and Power in Educational Administration*, eds. D. Corson and A. Hargreaves (1994). Forthcoming.

66See A. Neiman, "Ironic Schooling: Socrates, Pragmatism and the Higher Learning." *Educational Theory* 41 (1991):371-384.

67Avalos, pp. 9-12, 158-164.

68Gibson and Ogbu, see Chapter I.

69As in Spindler and Spindler, see Chapters I and II.

70H. See, for example, Ross, et al. "On Shifting Ground: The Post Paradigmatic Identity of U.S. Comparative Education." *Comparative Education* 22(1992): 113-131 where changing ways of seeing the field of comparative education are presented.

71G. Helmstad and F. Marton. Conceptions of Understanding. Paper presented at the AERA Annual Meeting, San Francisco, CA, April 20-24, 1992.

72See F. Marton "Phenomenography" and The Art of Teaching All Things to all Men," *Qualitative Studies in Education* 5 (1992): 253-268; and my study "Ways of Seeing Education and Social Change in Latin America: A Phenomenographic Perspective." *Latin American Research Review* 27(1992): 177-202. Drawing the boundaries of textual dispositions or categories is, of course, controversial. The anti-interpretive textualists argue for "system, interconnection and seamlessness." The structuralists call for at least provisional boundaries so as to confront those who draw boundaries of superordination in the social milieu. James Clifford concedes that "the free play of readings may in theory be infinite . . . [but] . . . there are at any historical moment [only] a limited range of allegories available." See Bartolovich, p. 29.

[73] See Anderson, pp. 20-21; Paulston, *Social and Educational Change*, pp. 372-373; Epstein, pp. 5 and 6; and Adams, p. 409.

[74] For a discussion of maps as socially embedded discourse see B. Harley's highly original essay, "Maps, Knowledge, and Power," in *The Iconography of Landscape: Essays On the Symbolic Representation, Design, and Use of Past Environments*, eds. D. Cosgrove and S. Daniels (New York: Cambridge University Press, 1988):123-138.

[75] Bartolovich, p. 23.

[76] For related attempts using figural space to map cognitive constructs, see for example, C. Hampden-Turner, *Maps Of the Mind* (New York: Macmillan, 1982) with 60 provocative maps that combine text and visuo-spatial imagery; K.W. McCain, "Mapping Authors In Intellectual Space: A Technical Overview." *Journal of the American Society for Information Science* 41 (1990):433-443 where superficial author co-citation analysis (ACA) using computers produces three-dimensional maps of clusters claiming to interrelate ". . . subject areas, research specialties, schools of thought, shared intellectual styles, or temporal or geographic ties"; and M. Lynch, "Pictures of Nothing? Visual Construals in Social Theory." *Sociological Theory* 9 (1991):1-21 where the author draws upon ethnomethodological and social constructivist studies of representation in the natural sciences. He finds that labels, geometric boundaries, vectors and symmetries may be used as a sort of "rhetorical mathematics" to convey the impression of rationality. While such "theory pictures" show little beyond what a text says in its writing, they are valuable in their ability to simulate a hermeneutic passage from written ideas to an independent representational or mathematical space. Here maps can provide an independent "work space" that reflexively informs a reading and make possible, as in this chapter, the representation of intellectual fields as theoretical landscapes.

[77] See Bartolovich, p. 30.

[78] See J.B. Harley, "Deconstructing the Map," *Cartographica* 26 (1989):1-20; and S.S. Hall, *Mapping the Next Millennium: The Discovery of the New Geographies* (New York: Random House, 1992). I view the emergence of new theory as a local process that takes place in competing language communities. Differences between communities are primarily between the "facts" i.e., the cultural code that each emphasizes, and the metaphors each employs. The application of old beliefs to new circumstances may accordingly be seen as an attempt to identify similarities and differences, making the acquisition of new theory an inherently metaphorical process. Here, the task for policy analysis shifts to interpretation of discourse and to new ways or metaphors--such as mapping--in which the representation of difference may be presented. From this perspective, Arib and Hesse argue that ". . . to make explicit the ramifications of metaphor [mapping] is to engage in critique, evaluation, and perhaps replacement. Metaphor [mapping] is potentially revolutionary." See M. Arib and M. Hesse, *The Construction of Reality* (Cambridge: Cambridge University Press, 1986): 156. For help in using internal grounds rather than an absolute benchmark assessment to evaluate

metaphors in context, Hesse has provided a useful formal framework to assess the suitability of metaphor in identifying similarity. See M. Hess, "The Explanatory Function of Metaphor," in *Revolutions and Reconstructions in the Philosophy of Science* (Brighton: Harvester, 1980): 111-124.

[79] See Paulston and Rippberger, pp. 193-194.

[80] P. Bourdieu, *In Other Words: Essays Towards a Reflexive Sociology* (Stanford: Stanford University Press, 1990): 27.

THE PROMISE OF A CRITICAL POSTMODERN CARTOGRAPHY

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ABSTRACT

This essay demonstrates how, through the employment of a critical "social cartography"--the creation of maps addressing questions of location and power in the social milieu--social research may move one step further as it struggles to distance itself from the positivistic restraints of modernism. Social cartography suggests not a synthesis, but the further opening of dialogue among diverse social players, including those individuals and cultural clusters who want their "mininarratives" included in the social discourse. We propose that social cartography has the potential to be a useful discourse style for demonstrating the attributes and capacities, as well as the development and perceptions of people and cultures operating within the social milieu. It offers a new and effective method for visually demonstrating the sensitivity of postmodern influences for opening social dialogue, especially to those who have experienced disenfranchisement by modernism.

The Promise of Critical Social Cartography

> Unwillingess to privilege and exempt from critique any locus of power is one hallmark of the postmodern attitude.
>
> Trevor Barnes

> All social action flows through boundaries determined by classification schemes.
>
> Robert Darnton

How might educational researchers enhance the presentation of their findings, particularly when their findings focus on the diffusion of heterogeneous orientations? In this study, we are concerned with developing in our comparative discourse a visual dialogue as a way of communicating how we see the social changes developing in the world around us. Visual images, depicting on the two-dimensional surface of paper or screen the researcher's perceived application, allocation, or appropriation of social space by social groups at a given time and in a given place, offer such an opportunity. Mapping social space is similar to both cognitive mapping and geographic cartography. Social cartography is created through "a process composed of a series of psychological transformations by which an individual acquires, codes, stores, recalls, and decodes information about the relative locations and attributes of phenomena in . . . [the] everyday geographical environment."[1] This process consists of "aggregate information . . . acquisition, amalgamation, and storage" producing a product depicting space peculiar to a point in time. Applied to education, social maps help to present and decode immediate and practical answers to the perceived locations and relationships of persons, objects and perceptions in the social milieu. The interpretation and comprehension of both theoretical constructs and social events can then, we contend, be facilitated and enhanced by mapped images.[2]

Figure 1 below summarizes the use of a wide variety of conceptual mapping perspectives that have appeared in the human sciences during the past several decades.[3] While these perspectives are framed in a variety of epistemological assumptions from the mimetic to the intertextual, they all seek to portray disciplinary phenomena –i.e., minds, texts, ideas *et al.*–as variously interrelated mapped images. Cognitive perspectives, have for example, been used to map mental space. Semiotic approaches have been used to map rhetorical space. Social perspectives have charted out perceived social positions and relations, and so forth. These perspectives are, of course, overlapping and not discrete. The point is that the utility of conceptual mapping as a secondary discourse style in the human sciences has been well demonstrated, yet, mostly ignored by educational researchers. It will be our task here to selectively appropriate rationales and examples from this earlier conceptual mapping experience and reinscribe them in our critical postmodern mapping project.

Mapping Perspectives	Focus On	Disciplinary Base	Exemplary Texts	
COGNITIVE	Mental space: mapping the mind	Humanistic psychology	R. Downs C. Hampden-Turner R. Sack	(1973) (1981) (1980)
SEMIOTIC	Rhetorical space: mapping texts and tropes	Linguistics, Literary theory	D. Apter R.H. Brown R. Scholes	(1987) (1987) (1982)
SOCIAL	Social space: mapping social positions and relations	Sociology, Urban studies	H. Lefebvre M. Liebman E. Soja	(1993) (1994) (1989)
GEOGRAPHICAL	Symbolic space: mapping landscape as metaphor, text, icon	Cultural geography	T. Barnes J. Duncan J.B. Harley	(1992) (1992) (1988)
COMPARATIVE	Intellectual space: mapping ways of seeing, forms of division	Cultural sociology, Philosophy	P. Bourdieu R. Paulston W. Watson	(1992) (1994) (1993)

Figure 1. A "bricolage," or assemblage, of some mapping perspectives in human sciences discourse.

Why Postmodern Social Cartography Now?

In this essay we focus on the concerns of three academic practitioners, Val Rust in comparative education and J. B. Harley and Edward Soja in geographic cartography, who have called on colleagues in these areas to move their respective academic fields toward a postmodernist integration, to become more explicative, comparative, and open to heterogeneous orientations in their academic discourse. Postmodernism is not promoted here, but, rather the possibilities for comparative fields to expand their knowledge bases through an appropriate, thoughtful, and skillful development and application of social maps. The postmodern turn opens the way to critical mapping exercises.

Arguing that postmodernism "should be a central concept in our comparative education discourse," Val Rust calls for the application of postmodernist theories to strengthen other representations of reality. Rust notes that Foucault believes there is a need to move beyond determinism and universals and that Lyotard discerns in the postmodern a distrust of modernist metanarratives. Rust also notes Richard Rorty's observation that metanarratives are "the theoretical crust of convention that we all carry and tend to universalize."[4] Postmodernism calls for deconstructing those universal metanarratives of social valuation common to the modernist era, metanarratives seen as totalizing, standardizing, and predominating.

Rust contends postmodern discussions and criticisms address the history of modernist society and culture as it was ingrained and justified by a world view obsessed with focusing on time and history. These two measures of the modernist world were not always separate cognitive structures, but links holding each at least parallel to the other, if not often viewed as the same entity. Rust contends, moreover, that postmodernism's liberating influences transcend not only combined time and history, but combined space and geography as well. Space becomes more important than time in our postmodern mapping discourse.

Rust entreats educators to relocate into this space, to extract from modernity the metanarratives to be dismantled, metanarratives containing the multiple small narratives previously hidden in the invisible space of modernist society. The small narratives that Rust suggests we draw our attention to can be the focus of comparative mapping efforts in a reflective and self critical postmodern social science.

Social cartography might also be seen to advance Heidegger's argument that "truth" is best understood not as correspondence or correctness of assertion or representation, but as the absence of concealment, i.e., what the classical Greeks called *aletheia*. When literary space is revealed in visual space, the map becomes a kind of language, the mode, or *dichtung* (literally a saying) in which what we see as truth happens. According to Heidegger, *dichtung* is prior to the technical instrumental understanding of language. Like Cartesian metaphysics in general, regional fields such as linguistics, cybernetics, artificial intelligence, etc., are seen by Heidegger to be impossible without the more primordial, pre-reflective realm with which *dichtung* proper is associated. This language realm inaugurates a "world" and gives to things their appearance and significance. It is perhaps best uncovered in poetry using literary theory. From this view, the essence of language is not propositional form, but openness to a resonance or nexus of relations out of which the "real" and the "human" may emerge.[5]

Suggesting as does Rust that the search for "the silent blueprint to life means looking in areas of darkness," a searching for new growth in an old growth forest, Star also focuses our attention on these small and previously hidden narratives, on making the invisible visible.[6] Her five rules help us track omissions and understand the mechanisms of power tied to the deletion of certain kinds of practical and intellectual work. They also provide a powerful rationale for reflexive practice and opening up mapping opportunities to all cultural communities in an intellectual field.

We consider it possible for comparative studies of social narratives to develop similarly to those of the studies and cartographic representations of the land. As social cartographers we look for the small and large erosions and eruptions of the social masses for the opportunity to map changes, to analyze and interpret events. We take the event and make it consumable, a commodity for our readers, by filtering, fragmenting, and re-elaborating it "by a whole series of industrial procedures...into a finished product, into the material of finished and combined signs."[7]

Mapping social space is an effective method for addressing Rust's thoughtful arguments calling for a postmodernist application to strengthen emerging representations of reality. There is, however, much we must learn and understand to become effective mappers. This requires an association with a academic field experienced in representing geographic space on a map. For this reason we introduce in our invitation to a postmodern reflection utilizing a social cartography two cartographers who have observed in their field several of the same concerns and needs addressed by Rust.

A leading advocate of the postmodern enterprise in geography and its practice of cartography, J. B. Harley, suggests that cartographers both in academia and in the field might consider postmodernity's potential for revitalizing their cartographic efforts. Harley contends that the premise of cartography has long been foundational, that map makers were compelled to create knowledge limited by scientific or objective standards.[8] Earlier than Harley, however, Robert McNee[9] observed that the tenacity of the cartographic process and its practitioners in the retention of positivist traditions could be attributed to their attraction to both the label and the role playing associated with being objective scientists. However, McNee and Harley differ in their explanations for the reasons cartography remained steadfastly grounded in positivism.

McNee argues that during the long history of cartography, this tenacious holding to the positivist ideal of the objective scientist resulted in the continued essentialist construction of textual metanarratives, both in the maps and in the semiotic representations used by the mapper. Harley, however, considers a more potent influence, arguing that after the last three decades, when much of academia moved toward or into the postmodern enterprise, cartographers adhered to a modernist style of application of knowledge, not only out of a concern for their reputations as objective scientists, but because of the influence modernist power structures had on the creation of maps. Harley states the field might better be served now if the power structures gave way to the new ideas postmodernism makes applicable for a critical cartography, a cartography permitting the interpretation of the map as well as opening the map to the intent and need of those who use it and those who assume the responsibility for its creation.

Harley makes an important distinction between the external power and the internal powers regulating the creation and reading of maps--or, by extension, any texts. External power, emanating from patrons, monarchs, and elite institutions, controlled what went into the map. Internal power was "embedded in the map text," determined by the inclusions and exclusions of information written into the map at the will of the external power. Internal power limited all map readers to only the knowledge included by the external power, to what Foucault calls a "spatial panopticon."[10] The reader had no practical way for developing an awareness of the excluded knowledge. These modernist maps that served to control and limit the knowledge of readers who were not included in the power structure are similar to the modernist objects that Baudrillard suggests "can be historically and structurally defined as the exaltation of signs based on the denial of the reality of things."[11]

Figure 2 develops the relationships in Harley's suggested top-down power influences as they controlled what little knowledge the reader could gather from a modernist map. These relationships, developed by Harley and visually reproduced on the map in Figure 2, example what we characterize the comedy of pageant; i.e., a display that Baudrillard finds to be "bogus to the extent that it presents itself as authentic in a system whose rationale is not at all authenticity, but the calculated relations and abstractions of the sign."[12] It is, as Baudrillard suggests, a finished product of combined signs, available to consumers who are expected to use it without altering its design or questioning its origins or purpose.

Note that in Figure 2 there are no "markedly different proposals also seeking to improve the rigor and relevance of research in education [or cartography] by encouraging tolerance, reflection, and the utility of multiple approaches in knowledge production and use."[13] Foucault offered a similar criticism of modernist social science, finding it to be a contemplation of space and time that treated space as "the dead, the fixed, the undialectical, the immobile" while time was "richness, fecundity, life, dialectic."[14] These perspectives of positivist restrictions to the concepts of knowledge and space are represented in the style of the map presented in Figure 2.

Concerned as are Rust and Harley with overcoming the problems of modernism's positivist treatment of space is urban cartographer Edward Soja who contends that in the past "space more than time, geography more than history,

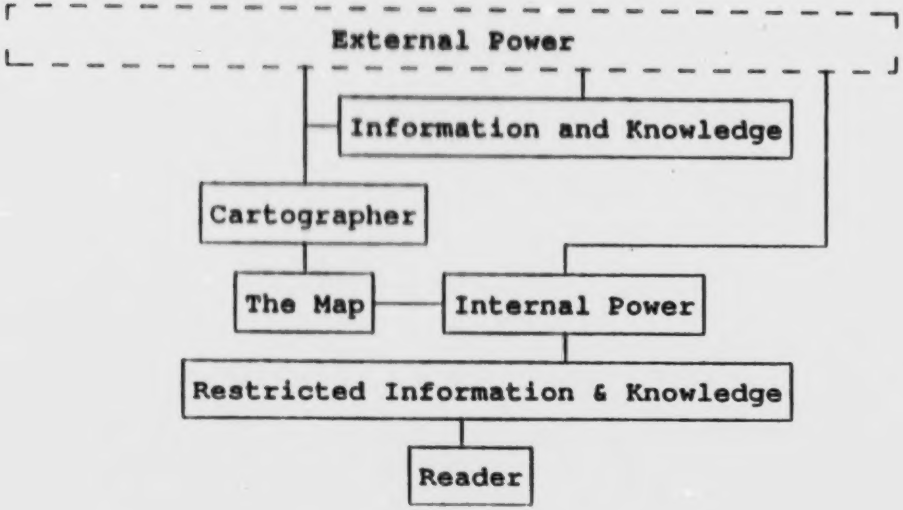

Figure 2. A map deliberately designed in the modernist fashion for its heuristic value illustrating what Harley considers the foundational constraints limiting both the scope and the function of cartography as well as the reader's access to knowledge from maps created under modernism's authority.

[hid] consequences from us."[15] Arguing as we do for the use of space to represent space as it is claimed by cultural clusters, Soja advocates making space and geography the primary focus and framework for the critical study of social phenomenon; situating the whereness of cultures and the events driving their realities are a better framing choice for the questions we ask and the answers we receive as we pursue meaning in the postmodern world.[16]

Soja's postmarxist analysis portrays modernism's purpose and influence during its extended epoch as a deliberate obfuscation of the spatiality of the map, "blurring [the reader's] capacity to envision the social dynamics of spatialization."[17] Postmodernism encourages us to detail the map--as in Figure 3 below, particularly where multiple mininarratives are revealed to occupy geographical and ideological space where only a metanarrative served before. Advocating space as the primary starting point for research diminishes the importance of time and creates the opportunity for researchers to apply to their craft the critical cartography advocated by Soja. Postmodern space is the research domain containing the objects to be mapped--the multiple social ideologies and convictions arising from modernism. The postmodern researcher in education, who may also become a postmodern cartographer, prizes both the space within the social milieu and the possibilities for a more inclusive mapping of that space, motivating the creation of multiple and inclusive maps.

Recall how Figure 2 shows external power's relationship to the creating and reading of knowledge from the map text, and consider whether this map represents a construction appropriate to Rust's argument for "the critical task of disassembling these narratives [while increasing] our attention to small narratives."[18] Clearly, Figure 2 is not an appropriate model for Rust's argument. Rather, this figure authenticates Charles Hampden-Turner's telling comment that the "visual-spatial imagery of the human is a style of representation largely missing from the dominant schools of psychology and philosophy, [so] there can be no pretence of impartially cataloguing the status quo. The image-breakers are still in charge."[19] Our advocacy of a critical social cartography has as its purpose the breaking of the image-breakers, the encouraging of comparative analysts to become image-makers and, in doing so, including a visual-spatial imagery of the human in a new educational discourse.[20]

Rust's and Harley's challenges to their respective fields of comparative education and cartography encourage illustrating the global vision reflecting the spatial as advocated by Soja. We suggest that the prospect of a critical cartography offers to education possibilities for examining educational problems "in the light of culturally determined needs, objectives, and conditions."[21] What is this social cartography we advocate? What is the benefit of critical social cartography to the practice of educational studies?

Rationales for and Examples of Critical Social Cartography

A map such as we advocate is a unique object. Initially, each map, as is true of any written discourse, is the property of its creator--it contains some part of that person's knowledge and understanding of the social system. As a mental construction representing either the physical world or the ideologies of cultures, maps can be characterized as what Baudrillard's translators describe as "art and life."[22] They note that Baudrillard finds art and life shape the system of objects, that a purely descriptive system "carve[s] out a truth."[23] While we find maps can shape the system of objects, we suggest that rather than carve out a truth they instead portray the mapper's perceptions of the social world, locating in it multiple and diverse intellectual communities, leaving to the reader not a truth, but a portrait--art representing the possibilities portrayed by being open to the world's multiple cultural truths.

Viewed from this perspective, then, what Baudrillard calls "the artistic enterprise" includes the map in the sense that the map is a descriptive system consisting of a collection of knowledge objects around a "point where forms connect themselves according to an internal rule of play."[24] The map reveals information about space by showing information scaled within the boundaries of another space. Mapping the elements of comparison models contributes to our comprehension of the social milieu, providing a point of departure for new research as well as for new maps resulting from the knowledge generated by that research.

An example of this type of anti-foundational map is the macro mapping of worldviews (i.e., paradigms) and ways of seeing (i.e., theories) uncovered using semiotic analysis in sixty exemplary comparative education texts presented in Figure 3 below.[25] This map embodies Soja's concern for "a social ontology in

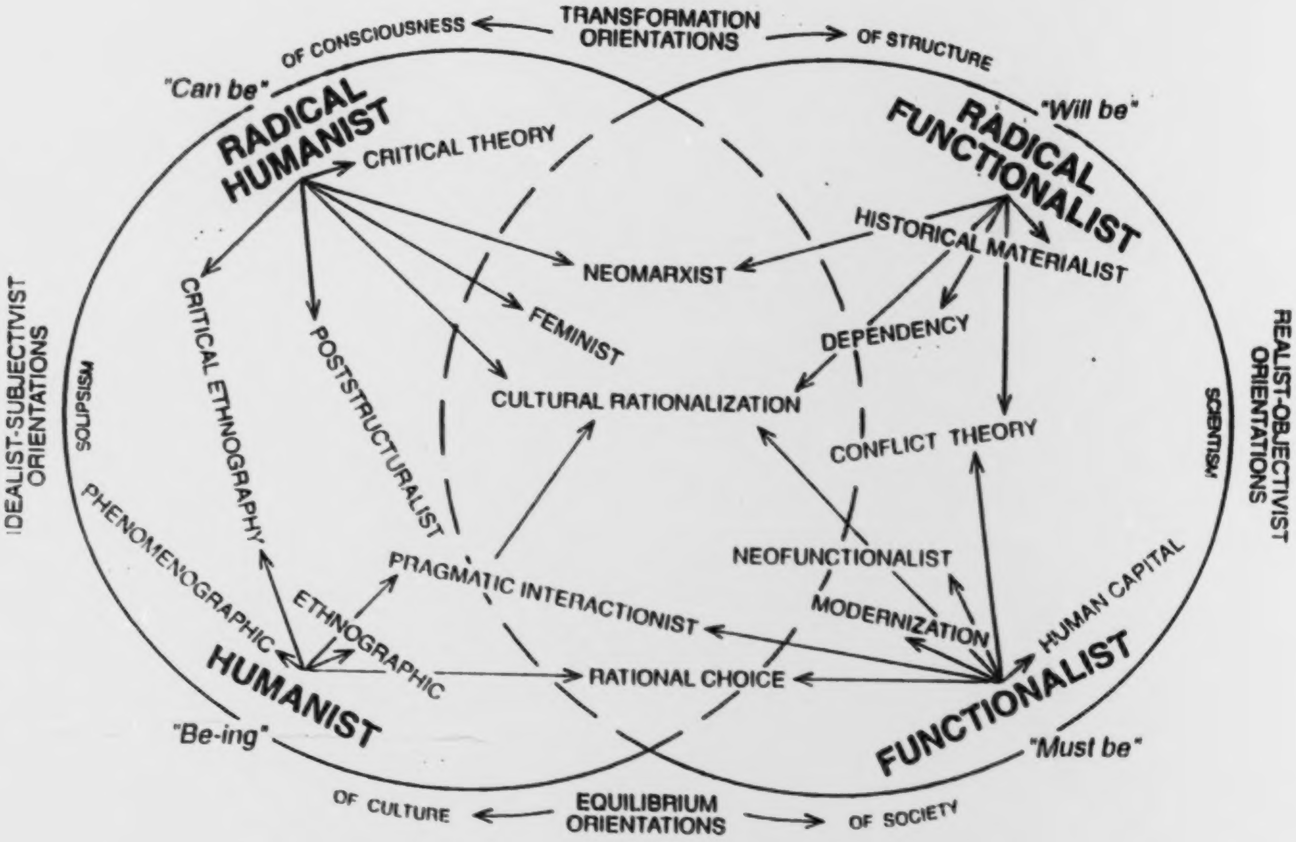

Figure 3. **A meta-discursive mapping of discourse communities in recent educational change studies. This post-modern map opens to all claimants space for inclusion in the intellectual field and social milieu.**

which space matters from the very beginning."[26] It is a study of society establishing "a primal material framework [of] the real substratum of social life."[27] This heuristic map discovers intellectual communities and relationships, illustrates domains, suggests a field of interactive ideas, and opens space to all propositions and ways of seeing in the social milieu. What appears as open space within the global representation is space that can be claimed by intellectual communities whose discourse is not yet represented on the map. It is conceivable that the part of the world Paulston draws our attention to does look like this, but it is his perception of the world derived from textual exegesis; however, it is probably not what Baudrillard would consider a map carving out the "truth." If not truth, but only one possible way of rationally seeing some identifiable parts of the world, how should or can Figure 3 be considered as a relevant contribution by those who read the map?

By creating on the surface of paper an image depicting a social framework, Figure 3 addresses Rust's recommendation to focus on mininarratives rather than metanarratives. The charting of paradigms and theories on the surface of paper grants to those constructs the mapper's recognition of their intertextual space in the real world. Readers may question whether the depiction is accurate, whether the allocation of space is appropriate, and whether the genealogy and relationships suggested by the arrows have developed or are developing in the directions the mapper indicates. If a reader has answers to these questions, the map is available for dialogue; if a reader disagrees, she or he need only redefine the space. We should, however, note that the map illustrated in Figure 3 resulted from intensive research of multiple published scholarly articles, each treating one or more of the knowledge perspectives located on the map. The map's creator defined the specific orientations of the map as criteria for locating each perspective. The mapper's article accompanying the map both documents and defends the decisions made. Accordingly, any attempt to redefine the space of this map or of any mapping of the mininarratives of the social milieu developed on any axial orientations should be given equally demanding and scholarly attention. This is one reason why Figure 3 can be viewed as "a holistic, context dependent, and integrative" treatment of knowledge not as "isolated facts, but as integrated wholes."[28] Spatial mapping of how paradigms and theories are represented in texts also moves comparative education away from a modernist "system for classifying societal data,"[29] away from structuring knowledge as illustrated in Figure 2, so that knowledge is no longer viewed as positivist data with unmediated access to reality. Instead, knowledge can now be seen as integrated forms of culture[30] where discourses as practices of signification provide new, albeit provisional, frameworks for understanding the world.

Burbules and Rice's analysis of postmodern sensibility notes Derrida's insistence "that the relations that bind and the spaces that distinguish cultural elements are themselves in constant interaction,"[31] a consideration highly adaptable to the relations Figure 3 shows between the numerous knowledge perspectives illustrated on the space of this map. Burbules and Rice find in Derrida the premise that any "particular formalization is . . . nothing more than the momentary crystallization and institutionalization of one particular set of rules and norms—others are always possible."[32] The sense of institutionalization as a concept to be understood or read into postmodern maps, such as Figure 3 is located in the formalization of scholarly ideas. From this viewpoint, the map cannot seek to authenticate an orthodoxy and remain a scholarly contribution. Thus, Figure 3 may be seen as a "momentary crystallization" of the space claimed by social and ideological ways of seeing only because it represents mutable space subject to continual reinterpretations, and available to be both transferred to and captured in ongoing struggles between interpretive communities.[33]

Another study showing considerable potential for a critical social cartography is Apter's phenomenographic representation of the history of the Sanrizuka movement and its extensive use of non-formal education to oppose the construction of the Narita Airport outside Tokyo[34] (Figure 4). Using rhetorical analysis, Apter isolates within this confrontation a series of five distinctive episodes, each identified with a metaphor (i.e., transference) and a metonymy (i.e., substitute naming) "derived from interviews and written descriptions of events provided by those deeply involved in the movement."[35] Apter describes the spatial bounds of his study as they were set by the participants of the revolt, "defining a larger cosmological space, underground to a sacred soil, above ground to the sky itself."[36] In this way, Apter provides a readily visual three

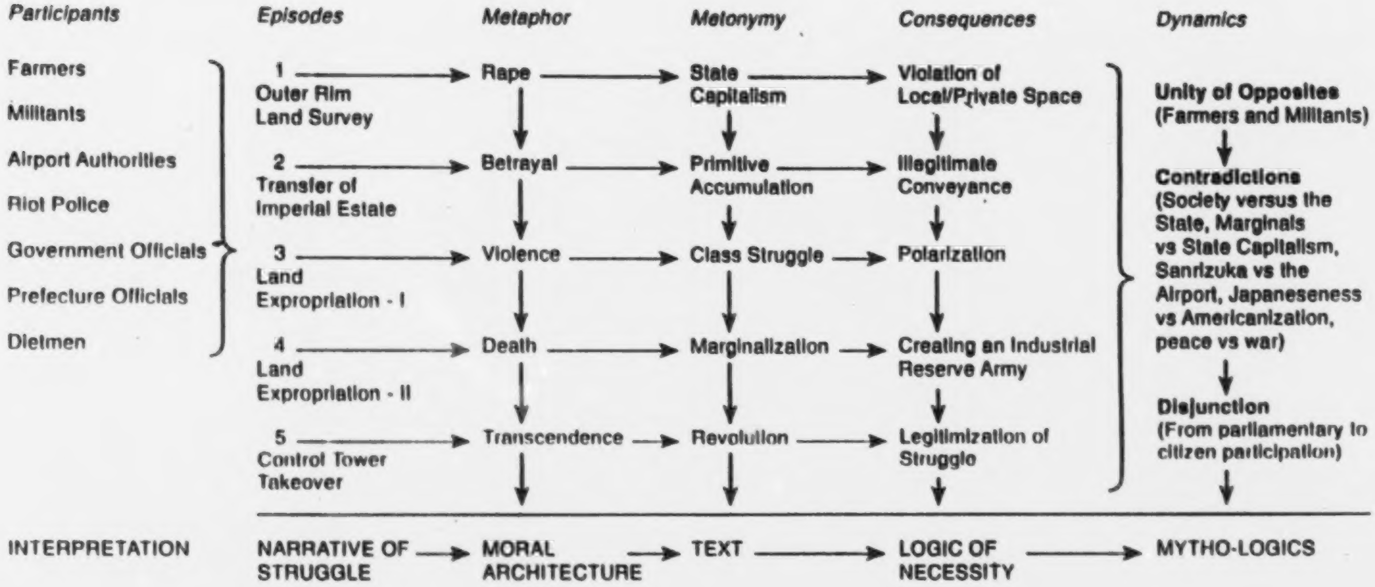

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Figure 4. Captioned by Apter as "Two Crossroads and a Terrain as a Semiotic Space," this figure derives its phenomenology (episodes and consequences) from phenomenography (narrative-dependent content).

dimensional physical cartography. The questions raised and considered at Sanrizuka not only addressed whether the land would be retained by traditional farmers or converted to use for a modern airport, but because the land was to be used for an airport, the questions involved the symbolic and real use of the air above the land.

In addition to the physical cartography of Sanrizuka, and politically and socially extended beyond its bounds, is a moral cartography Apter identifies through the participants' metaphors and metonymies. This aspect of Apter's study coincides with our purpose noted above, that accuracy and inclusion in a critical, postmodern, social cartography, considers not only the space being mapped, but the perceptions offered by the claimants of that space.

The ordering of information in Apter's figure of the events at Sanrizuka offers opportunities to create multiple maps. Our single concern with the information provided is that the metaphors and metonymies Apter identifies with the five episodes of Sanrizuka would seem to be appropriate only from the perspectives of the farmers and militants--it is doubtful the other five participants he identifies on the map would use these terms to describe the events. So when Apter writes in his caption that the metaphors and metonymies "form a narrative of moral outrage and a radical text" it seems doubtful he is referring to the airport authorities or government officials, for example. We argue that not only would Apter's figure tell quite a different story when metaphors and metonymies from other participants were substituted, but that the mapping of the Sanrizuka struggle begun by Apter will require multiple overleafings to represent accurately the perceptual semiotics of the multiple participants. In this way, Apter's analysis might better see the whole from its parts and the parts from the whole. From a critical postmodern perspective, meaning is derived from, and not projected into the text.

Conclusion

We propose, first, that the structures of multiple education and knowledge systems can be recreated in one or more maps, images of a social cartography where the space of the social map reflects the effect of social change on real space; and, second, that comparative education researchers consider representing that space through the creation of maps.

Our rationale for this proposal is that open mapping promises to provide the comparative educator a better understanding of the social milieu and to give all persons the opportunity to enter a dialogue to show where they believe they are in society. The map reveals both acknowledged and perceived social inclusions while leaving space for further inclusions of social groups and ideas. Whether the map is considered a metaphorical curiosity or accepted as a more literal representation, it offers comparative researchers an opportunity to situate the world of ideas in a postmodern panorama, disallowing the promotion of an orthodoxy.

In this essay we have demonstrated how through the employment of a critical "social cartography"–the creation of maps addressing questions of location in the social milieu–social research may move one step further as it struggles to distance itself from the positivistic restraints of modernism. Postmodern social cartography suggests not a synthesis, but the further opening of dialogue among diverse social players, including those individuals and cultural clusters who want their "mininarratives" included in the social discourse. We propose that social cartography has the potential to be a useful multivocal discourse style for demonstrating the attributes and capacities, as well as the development and perceptions of people and cultures operating within the social milieu. It offers educators a new and effective method for counter hegemonic boundary work by visually demonstrating the sensitivity of postmodern influences in opening social dialogue.

ENDNOTES

1. R. M. Downs and D. Stea, "Cognitive Maps and Spatial Behavior: Process and Products." In *Image and Environment: Cognitive Mapping and Spatial Behavior*, ed. R. M. Downs and D. Stea. (Chicago: Aldine Publishing Company, 1973), p. 9.

2. See for example, B. Latour, "Drawing Things Together." In *Representation in Scientific Practice*, eds. M. Lynch and S. Woolgar. (Cambridge: The MIT Press, 1988). p. 33; and M. Monmonier, *Mapping It Out: Expositive Cartography for the Humanities and Social Sciences*. (Chicago: The University of Chicago Press, 1993).

3. R. M. Downs; D. Stea (1973); and C. Hampden-Turner, *Maps of the Mind*. (New York: Collier Books, 1981); R. D. Sack, *Conceptions of Space In Social Thought*. (Minneapolis: University of Minnesota Press, 1980); D. Apter, *Rethinking Development: Modernization, Dependency and Postmodern Politics*. (Newbury Park: Sage Publications, 1987); R. H. Brown, *Society As Text: Essays On Rhetoric, Reason, and Reality* (Chicago: The University of Chicago Press, 1987); R. Scholes, *Semiotics and Interpretation* (New Haven: Yale University Press, 1982); H. Lefebvre "The Production of Space." *Sociological Theory 11* (1993); M. Liebman and R. Paulston, Social Cartography: A New Methodology for Comparative Studies. Paper presented at the American Educational Research Society Annual Meeting, New Orleans, March 1994; E. Soja, *Postmodern Geographies: The Reassertion of Space in Critical Social Theory* (London: Verso, 1989); T. Barnes and J. S. Duncan, *Writing Worlds: Discourse, Text and Metaphor in the Representation of Landscape* (London: Routledge, 1992); J. B. Harley, "Deconstructing the Map" in T. Barnes and J. S. Duncan (1992); P. Bourdieu and L. J. D. Wacquant, *An Invitation to Reflexive Sociology* (Chicago: The University of Chicago Press, 1992); R. Paulston "Mapping Knowledge Perspectives in Studies of Education Change" in *Transforming Schools*, ed. P. Cookson and B. Schneider, (New York: Garland, 1994); W. Watson, *The Architectonics of Meaning: Foundations of the New Pluralism* (Chicago: The University of Chicago Press, 1993 edition).

4. V. Rust, "Postmodernism and its comparative education implication," *Comparative Education Review* 34 (1990). p. 616.

5. In poetry, language can be seen as a mode of bringing a world to disclosure where the world and things are carried over and appropriated to each other in the moment of disclosure. In his accessible analysis of Heidegger's ideas, Timothy Clark illustrates the opening-out and decentering possibilities of *dichtung* as a mode of appropriation with a poem by Charles Tomlinson which begins:

> Poem
>
> space
> window
> that looks into itself
>
> a facing
> both and
> every way

See T. Clark, Chapter One, "Overcoming aesthetics" in *Derrida, Heidegger, Blanchot: Sources of Derrida's Notion and Practice of Literature.* (Cambridge: Cambridge University Press, 1992). pp. 20-63. Tomlinson's poem is found in its entirety in his *Written on Water,* (Oxford: Oxford University Press, 1972). p. 31. Like this poem, social cartography may be seen to constitute something new. It does not attempt to merely copy or objectively describe what it appropriates. Rather, it creates new meanings by its spatial juxtaposition of images and signs. Exemplifying *dichtung*, mapping names "the open clearing whereby any object can emerge for any subject, (and) could not be reduced to the status of that which it renders possible" (Clark, 41).

6. S. L. Star, "The Sociology of the Invisible: The Primacy of Work in the Writings of Anselm Strauss." In *Social Organization and Social Process: Essays in Honor of Anselm Strauss*, ed. D. R. Maines (New York: Aldine de Gruyter, 1991). pp. 265-283. Star's rules to study invisible things include 1) The rule of continuity: phenomena are continuous. There is no dualism. Objects are created not by reacting to something, but by overleafing stratified networks originating from radically different points. Power is the imposition of a position in such space. 2) The rule of omniscience: everybody has several viewpoints and every view is only part of some picture, but not the whole picture. The revealing and articulating of viewpoints is the way we can understand something about truth, a fundamentally interactional, social phenomenon; 3) The rule of analytical hygiene--i.e., concepts are verbs, not nouns; 4) The rule of sovereignty: every standpoint has a cost; and 5) The rule of invisibility: successful claims to make invisible phenomena visible require the assertion of power

and the fundamental pluralism of human interaction.

7. J. Baudrillard, *Revenge of the Crystal.* (London: Pluto Press, 1990). p. 92.

8. J. B. Harley, pp. 234-237.

9. R. B. McNee, "Perspective--Use It or Lose It," *Professional Geographer* 33 (February, 1981). p. 12.

10. A panopticon is defined as "a prison or workhouse so arranged that all parts of the interior are visible from a single point." Although the noun mated with the adjective "spatial" serves to make the point, we believe a better metaphor or vision of social cartography would be "panoptic space." This phrase, too, requires some clarification if it is to be contextually advantageous to our argument. First, the adjective "panoptic" typically means (1) "permitting the viewing of all parts or elements" or (2) "considering all parts or elements; all inclusive." Because these definitions require an omniscient perspective, we believe for the purposes of social cartography that to limit panoptic to mean "the total of those parts or elements being offered by the mapper for the readers' consideration" serves our ambition and requirement. Further, a definition of "space" suited to social and cognitive mapping is that associated with mathematics: "a system of objects with relations between the objects defined." From this argument, then, a working definition of the "panoptic space" we strive to map in our critical social cartography is "the total of those parts or elements of a system of objects defined by the social cartographer and presented for the consideration of all in the social milieu."

11. Baudrillard, p. 63.

12. Baudrillard, pp. 35-36.

13. R. Paulston, "From Paradigm Wars to Disputatious Community," *Comparative Education Review,* (August, 1990). p. 396.

14. Foucault in Harley, 1989, 4.

15. E. Soja, p. 71.

16. We might, however, take note of several recent feminist warnings to be wary of Soja's claims for supposedly democratic methodologies that in fact ignore realities of power and inequality. Attacks accusing Soja and others of "foundationalism" and "androcentrism" can be found in R. Deutsch, "Boys Town" and D. Massey, "Flexible Sexism." In *Environment and Planning D: Society and Space* 9, 1991.

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17. Soja, p. 122.

18. Rust, pp. 625-626.

19. C. Hampden-Turner, p. 8. Hampden-Turner sees anti-imagists alive and well today in the Puritan--cum--behaviorist intellectual tradition: "Modern behavioral science is thoroughly infused with Puritan ethics, for example, the idea of a scientist as a predicting and controlling agent for scientific determinism; the dogma of 'immaculate perception'; a preference for visible activity publicly verifiable, and the 'godly discipline' of rigorous experimental minutiae. There is the same rejection of speculative questions, of the private imaginings of subjective personality and reconciling schema in general" (1981, p. 34).

20. See W. J. T. Mitchell, *Iconology: Image, Text, and Ideology*. (Chicago: University of Chicago Press, 1988).

21. R. Raivola, "What is Comparison? Methodological and Philosophical Considerations," *Comparative Education Review* 29 (1985). p. 372.

22. P. Foss and J. Pefanis, "Translators' Note" in J. Baudrillard, *Revenge of the Crystal*. (London: Pluto Press, 1990) p. 11.

23. *Ibid*, p. 13.

24. Baudrillard, p. 27.

25. R. Paulston, "Comparative Education: Paradigms and Theories." In *The International Encyclopedia of Education*, eds. T. Husen and N. Postlethwaite. (Oxford: Pergamon Press, 1994).

26. Soja, p. 7.

27. Soja, p. 119.

28. V. Masemann, "Ways of Knowing: Implications for Comparative Education," *Comparative Education Review* 34, (November, 1990). p. 465.

29. B. Holmes, "Paradigm Shifts in Comparative Education," *Comparative Education Review* 28 (November, 1984) p. 591.

30. *Ibid*., p. 469. The pragmatist view of constructed knowledge stands in stark contrast to the correspondence theory of truth. For neo-pragmatists like R. Rorty, it would be useless to ask if the vocabulary of one intellectual community rather than another is closer to truth and reality. Rather, different vocabularies--and maps--serve different purposes,

and clearly there is no such thing as a purpose that is closer to reality than another purpose. See his "Pragmatism as Anti-Representationalism" in *Pragmatism: From Pierce to Davidson*, ed. J. P. Murphy. (Boulder: Westview, 1990). p. 3.

31. N. C Burbules and S. Rice, "Dialogue Across Difference: Continuing the Conversation." *Harvard Educational Review 61* (November, 1991) p. 400.

32. *Ibid.*

33. Here our mapping rationale is close to H. G. Gadamer's call for a critical hermeneutics able to ". . . raise to a conscious level the prejudices which govern understanding . . . to realize the possibility that other aims emerge in their own right . . . to realize the possibility that we can understand something in its 'otherness'." See his *Truth and Method*. (New York: Seabury Press, 1975), especially pp. 81-86.

34. D. E. Apter, p. 250.

35. *Ibid*, p. 250.

36. *Ibid*, p. 248.

SOCIAL CARTOGRAPHY: A NEW METHODOLOGY FOR COMPARATIVE STUDIES

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Abstract

This study expands our thesis that when educators address the cultural values and differences revealed by unique and often competing knowledge claims, they can enhance their research by developing and including in their findings a cognitive map showing their perceptions of how these knowledge claims interrelate. Our early work in this area explained how social mapping appropriates scaled representation of a larger real world from geographic cartography, and noted social cartography's heuristic value and implication for furthering comparative investigations through a hermeneutics concerned with extending understanding.

In this paper we present arguments taken directly from recent comparative studies to explain our social cartography rationale and practice. We note where we believe cartographs could enhance these studies, clarifying findings, and inviting dialogue. We also model the several social map types we have identified, and use a postmodern sensibility to map the cartographic possibilities we offer.

SOCIAL CARTOGRAPHY: A NEW METHODOLOGY FOR COMPARATIVE STUDIES

> "The postmodern challenge is to face up to relativism in human knowledge, and to proceed from this position to a better understanding."
>
> Michael Dear

This study expands our thesis that when educators address the cultural values and differences revealed by unique and often competing knowledge claims, they can enhance their research by developing and including in their findings a cognitive map showing their perceptions of how these knowledge claims interrelate. Our early work in this area explained how social mapping appropriates scaled representation of a larger real world from geographic cartography, and noted social cartography's heuristic value and implication for furthering comparative investigations through a hermeneutics concerned with extending understanding. (Paulston and Liebman, 1994, 1993). In this paper we present arguments taken directly from recent comparative studies to explain our social cartography rationale and practice. We note where we believe cartographs could enhance these studies, clarifying findings, and inviting dialogue. We also model the several social map types we have identified, and use a postmodern sensibility to map the cartographic possibilities we offer.

A Call for New Research Approaches

Many of us reviewing comparative education literature would probably agree with Anthony Welch (1993) that the field's common core "has to do with the dynamics of cultural transactions and interaction" (7). He makes an argument for developing new investigative methods that are better able to recognize the reciprocal relationships that emerging cultures can realize, noting new methods are needed because the "major research traditions which have been employed in comparative education, are often fundamentally deficient in the ways they conceive...culture, and that therefore much of the reality of other cultures is lost, or misconceived" (7). We consider this argument's importance centers on the fact that comparative methodology remains keyed to modernism's positivist and historicist methodologies. These metanarratives smothered what we today recognize are the mininarrative knowledge claims of cultural clusters. In the context of this paper, our social cartography project develops cultural and other relational maps based on observed similarities and differences found in the theoretical rationales developed in fellow comparativists' discourses.

Welch's stated concern, a reconceptualization requiring new research methods, focuses on identifying research forms "based on more reciprocal, less coercive, cultural relations" (7). His conclusion is that Gadamer's hermeneutic thesis (1986) offers such a method. We will review these arguments momentarily. The cultural milieu we comparativists now recognize and devote our attention to has expanded not only in terms of the changes effecting persons living within a given milieu, but in our perception of the multiplicity of cultural values and forms. Welch identifies two dominant cultural/educational perspectives, describing the first as "an integrative force in society" (7) because it represented the cultural form all persons in a society supposedly aspired to achieve. While he does not name this cultural form, we consider it to be the culture of commodity because it provides individuals with an opportunity to acquire the cultural capital others define and validate as offering the greatest prospect for social success in a society with "a venerable and largely fixed tradition" (7). In other words, by accepting its tenets and working to attain its standards, persons can buy into the culture of commodity. He identifies these cultural traditions as those assigning performance conditions to preferred intellectual objectives and content, such as those reflected in elite education institutions. Until recently this cultural form was the dominate "ideal-type advanced [in] Western economy and society" (18). From this platform "modernization theorists were unrelenting in their desire to impose the structural attributes of an ideal-typical modern society upon less developed nations" (18). It seems this is the coercive cultural form Welch identifies when he calls for "new forms of investigation which are based on more reciprocal, less coercive, cultural relations" (7)

The other cultural form discussed is "more reciprocal, less coercive." It is the perspective where culture is "an arena of social contest, largely unequal, in which the dominant group gains, or retains, control over a cultural definition which is thus seen as more legitimate, and of higher status - and which is subsequently confirmed in schools" (8). This cultural form, Welch calls it the "selective tradition," removes itself from the integrative aspiration culture, substituting a cultural-contests-field where many self-identified ideologies seek recognition. This perspective of contested culture, evident more in contemporary societies, is identified by the advancement of Western cultural mininarratives and third world political and economic independence. It is the perspective that not only opens the field to distinctive new methods to identify competing cultural claims and explain how these claims differ from and challenge one another, it also lends itself to social cartography, the method we choose to support our research of these competing cultural claims.

Welch notes that contemporary hermeneutic study focuses on developing understanding rather than increasing knowledge, a focus rejecting "the traditional (Cartesian) stress on dualisms," the dichotomy of the subject and the object by which traditional positivist and historicist methodologies manipulated and controlled the object of studies. Understanding occurs presumably when controls and manipulations are not methodologically enforced on the object. As we noted earlier, Welch expresses a concern for developing new comparative methods, noting that he has identified less coercive and more reciprocal forms in Gadamer's work. This interpretation provides a new locus for social cartography's theoretical rationales developed and identified previously in our work. (Paulston and Liebman, 1994) We will review our project in terms of these three relationships. We will then consider how social cartography can fill the lacunae Welch suggests still exist in the favored methodologies utilized in comparative studies of education and intercultural relations.

In the first research relationship the researcher "rigorously sets out to rid oneself of any presuppositions with regard to the other, in order to discover its [sic.] essence" (20). The researcher's self-distancing resembles the scientist's objectification of phenomena. This methodology "leaves no room for the expression of the other culture in its own terms...This is the realm of pure theory...in which morality plays no role" (20). This positivist science methodology allows no input from the research object because it "objectivises another culture" (22).

The second research relationship also positions the researcher preferentially to the research object, but here, according to Welch, the researcher allows the research object to have input. But as in critical theory, the research object does not speak for itself. The researcher claims both greater knowledge, "true" consciousness, and the control of the research object's consciousness and knowledge. This research methodology "does not provide a base for mutual reciprocal relations between cultures" (Welch, 22).

The third research relationship is one of "interaction, [where] there are no privileged epistemological or cultural positions, there are just forms-of-life, or language games, in Wittgenstein's sense" (21). The researcher's cultural background cannot be taken for granted, but is viewed in the other culture's terms. This is "an open dialogue in which each protagonist accepts that their understanding of the other as well of themselves is substantially changeable" (22).

We find some of these basic assumptions of the problems and directions of comparative methodology agreeable to our polyocular perspective. However, there is a weakness we identify in Welch's argument. While he advocates an interactive cultural relations study model, he does not propose a workable or working model meeting the criteria he advances. For example, his conclusion notes: "The implications for a meaningful and relevant comparative education are that decisions and analysis should be based on genuine attempts at developing mutual understanding" (22). We agree, but while we continue to await what seems to be a promised forthcoming revelation - a new comparative methodology proposed to provide such understanding - we are instead left merely with an observation: "throughout comparative education, forms of genuine partnership are being called for which can herald a new intellectual and practical style, so that understanding based on mutuality is given more scope, and the 'indissoluble individuality of the other' is recognized" (22-23). While at the beginning of his argument he informs us "newer forms of investigation which are based on more reciprocal, less coercive, cultural relations, are advanced as one means to develop new forms of comparative research" (7), in the end we find nothing more being advanced than the refrain that the comparative education field is calling for new methodologies. This conclusion is to his argument what a glass of water is to a drowning man. We offer that our social cartography project provides the scope for viewing the social milieu, and what he calls a "new intellectual and practical style" necessary to promote understanding between what we have coined the "cultural clusters" (Paulston and Liebman, 1994) of contemporary society.

Such observations of old methodological forms and the need for a new methodology serve well the social cartography project which we see overcoming "the supposedly objective knowledge...and scientific outlook which deforms praxis" (Welch, 22). Social mapping, in its more loosely constructed forms (Figure 1-B), as well as the highly structured form (Figure 1-A), represents the inter-cultural dialogue the third research relationship advances. The social map becomes a playing field welcoming all into the game with the single caveat that they continue rather than stifle the dialogue. To stifle dialogue presumes control or power, a detrimental proposition we argue against strenuously. (Paulston and Liebman, 1994)

The Mapping Rationale

Social cartography rejects no narrative, whether it is a metanarrative or that of a localized culture. Although metanarratives are accepted and mapped, they are neither privileged nor accepted in their previous role of dominating other narratives. Thus, rather than legitimizing metanarratives in their modernist form, our mapping project introduces the concept of the mininarrativization of the metanarrative. Thus the breadth of research possibilities and understanding that social cartography envisions accepts all points-of-view, their general validity opens opportunities for comparison because mapping does not "deny integration of cultures and harmonizing values" (Rust, 191, 616). Social cartography arises from what Rust notes are the possible "legitimate metanarratives...[that] open the world to individuals and societies, providing forms of analysis that express and articulate differences and that encourage critical thinking without closing off thought and avenues for constructive action" (616).

Constructive action evokes expansion and analysis of the human condition which currently is experienced "within the tension produced by modernist and postmodernist attempts to resolve the living contradiction of being both the subject and object of meaning" (McLaren and Hammer, 1989, 31). Social cartography's discourse style acknowledges the researcher's prerogative to create a perceptual or cognitive social milieu map. Rules and external powers not only constrain the mapping project, they would force centering or decentering on others. The map locates contemporary human conditions, providing multiple cultural clusters with a grounding - a place in a perceived social reality that juxtaposes each with the others sharing that reality. Map position is not determined, it occurs from the relationships perceived by the mapper. Jeffrey Alexander (1991) might include social cartography in his "claim to reason" definition, that the cartographic exercise might demonstrate how "sociological theory can achieve a perspective on society which is more extensive and more general than the theorist's particular lifeworld and the particular perspective of his or her social group" (147).

McLaren and Hammer's (1989) view that contemporary social actors are situated within the modernity and postmodernity tension suggests that the social milieu's shape is determined by the interactions of multiple cultures. The social cartograph provides a comprehensible scaled model of the social milieu, modeling society's shape in a way permitting our study from wherever we may be situated on a map representing the perspectives we have of cultural relations in the social space. The creation and study of the social map offers us the possibility to achieve an enhanced understanding of the postmodern world, creating what McLaren and Hammer note would be "a sensibility or logic by which we appropriate in the contemporary context, cultural practices into our own lives" (34-35). Social cartography, then, in our analysis, identifies with Berger and Luckmann's thesis in their The Social Construction of Reality.

In their introductory discussion, Berger and Luckmann (1966) differentiate three understandings of reality and knowledge. The first is that of the man in the street who presumes both reality and knowledge are something taken for granted. However, there is the problem that every man on the street is not formed from a single social mold, but that societies each form their individuals differently. A second understanding identifies the differences among the conceptual realities as they are understood by the society, and as these realities are differentiated and understood by the sociologist. The third understanding of reality is the philosopher's who takes nothing for certain while striving to clarify the human reality and knowledge the man in the street takes for granted.

We join with King (1990) in the second category of understanding where we identify within the framework of a social map the juxtapositions of emerging cultures' knowledge realities, aiding the development of understanding in terms of cultural realities and knowledge bases. Brian Holmes (1984) maintains that the complexity and distinction "between our social, mental, and physical worlds draws attention to the need for simplified ideal typical models to describe our 'real' worlds." We offer that social cartography, as constructive hermeneutics, is a discourse style answering Holmes' call for a simplified model because it describes the world.

Constructing a social cartography model is similar to any geographic mapping (although cartesian coordinates are not mandated) that reduces a 'total' space to a much smaller scale. While the purpose and goal of positivist geographic cartography is to create an empirically perfect model, our purpose is more aletheistic. Creating mapped social models cannot finalize with any exactitude a true representative. Maps created by social cartographers are not to be replicable by other social mappers. Social cartographs may be added to or amended, and they are certainly open to debate, change, and even personalization. (see Figure 1-B) Thus, while a geographic cartographer of empirical space can win an argument that a map should be altered because it does not replicate the physical world measurements, social cartographers do not argue validity because they understand that others are encouraged to question the spatial relationships of mapped social realities: social maps are not empirical, mathematically correct representations. The social world cannot be measured, but it can be viewed, reported, and compared. Because of this, we see social cartography as post paradigmatic: it will not create new paradigms, nor will it initiate a revolution of paradigms as suggested by Thomas Kuhn. (1962) Rather, it provides "a perspectivist orientation for which there are no facts, only interpretations, and no objective truths, only the constructs of various individuals

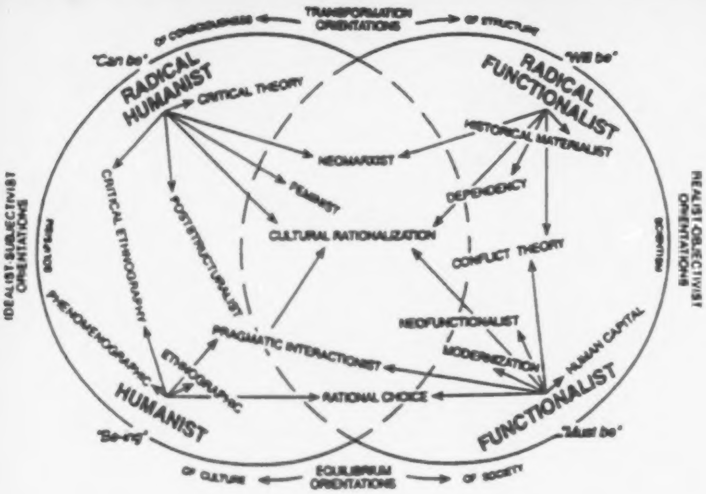

Fig. 1-A: A phenomenographic/conceptual landscape of contemporary theories in education discourse.
Source: Paulston, 1994.

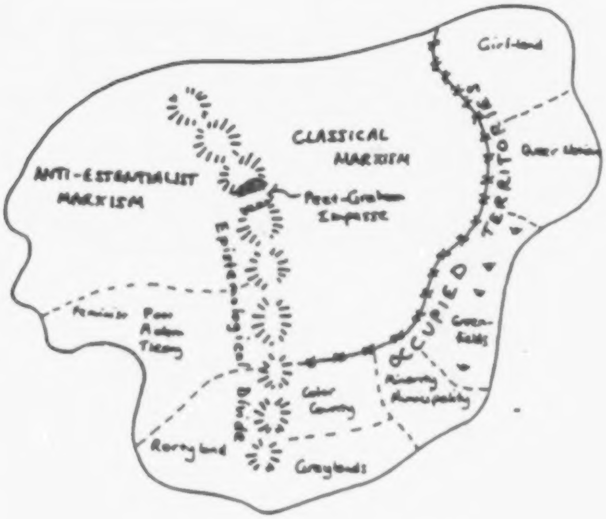

Fig. 1-B: A conceptual landscape of contemporary ideologies.
Source: Graham, 1992.

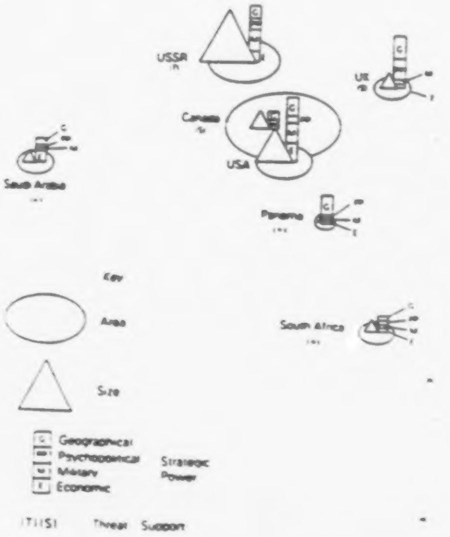

Fig. 1-C: A mimetic map exhibiting phenomenographic and conceptual styles.
Source: Eaton in Gould and White, 1986.

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and groups" (Best and Kellner, 1992, p. 22). Social cartography, in short, helps comparative educators, along with all participants in the educational enterprise, order and interpret the relativism and growing fragmentation of our time.

Two examples of mapping already noted illustrate the possibilities of social cartography. The first example (Figure 1-A) is representative of the structure emerging from textual exegesis and the mapping of ideas in semiotic space. The second example (Figure 1-B) is free of the constraints of both method and structure. Both are examples of what we call the map, but whether they are maps, or what mapping category in which they are located, has also been considered by environmental geologist Joseph R. Seppi.

Seppi (1992) has informed us that the term map when applied to the social cartography project is used "loosely." He offers a framework for two models of cartography and then suggest a third that describes some of our proposals and expectations for social cartography. His first framework treats mapping in its conventional style, the abstracting onto a two-dimensional plane, limited in a cartesian coordinate system, the forms and shapes occupying physical space. Conventional maps include a number of variables predetermined by the mapper, variables set by accepted scientific standards, including the Cartesian plane, scientific measurements, and symbols. These variables are then represented as depictions of real physical space in a manner consistent with what is found in that space.

The second framework Seppi offers builds on the work of Bertrand Russell (1937) who theorizes that knowledge can be represented in geometric shapes. Since symbols on maps represent the mapper's perception of the physical environment, a mapper also should be able to express a mapped geometric vision of knowledge. It follows that the map's features explicitly illustrate the mapper's perception of some reality - "physical subaerial phenomena," "subjective cognitive phenomena," or "conjective metaphysical phenomena."

Seppi identifies the Figure 1-A map specifically as neither of these models, but as a visualized reality. This social cartography model is an "a-textual definition" of a complex textual network as read and interpreted by the mapper. The Figure 1-A social cartograph is a geometric pattern system that is "subject to posteriority and even iconification."

Seppi's well developed argument suggests we social theorists have a great deal more to learn about cartography. In our interpretation, however, we entreat some leeway for disagreement, believing that social cartography borrows from his first model because it does identify and represent on a two dimensional plane features perceived to occupy physical space. In the case of social cartography, however, the features are not mountains, rivers, and cities, but the networks of humanity built on the variety of understandings and interpretations of numerous socially constructed associations, or cultural clusters' knowledge claims. Because cultural clusters occupy physical space that as often as not is contested, we believe social cartography often identifies with geo-political maps because one group's political features are what attract persons to a particular space. The ideological space they choose, their affiliations, directly informs their choice of real space so that when we as social cartographers map our vision of ideologies and social theories we are, in a way, also mapping the isolated pockets of real space people occupy because of their choices as well as the real spaces they choose not to occupy because of those same choices.

While we call those who practice this particular style of discourse social cartographers, Seppi has coined a wonderful word for those who create social cartography: cognographers are those persons whose mind's eye visualizes an image of social reality and express that vision on what we will still refer to loosely as the map.

Social cartography, mapping the plane of multiple social realities, locates itself eclectically. It is indifferent to ideological and theoretical controversies. However, we foresee social cartography's only or primary practitioners and audience will probably be found among those who share the world view similar to that of Lyotard (1984) who identifies the postmodern consciousness as an "incredulity toward metanarratives," a consciousness skeptical of universals embracing a philosophy of local knowledge claims.

Map Types

As a part of our thesis we have identified three map types. These types are not hard and fast, but often overlap. These types motivate mapping ideas and provide mappers with origin points to develop a significant map illustrating a research perspective. The first map type, the phenomenographic, positions phenomena in relation to one another. (Paulston, 1992) Phenomenographic maps may take any form presenting the reader with research information. Generally we believe the phenomenographic map as a cartography of thought is more extensively researched and referenced. This, of course, is our perception and not a hard fact. Ference Marton (1994) defines phenomenography as ways of seeing, i.e. "the empirical study of the differing ways in which people experience, perceive, apprehend, understand, conceptualize various phenomena in and aspects of the world around us."

The conceptual map develops perceived relationships within or between categories. Unlike the research based phenomenographic map, the conceptual map is more open to the mapper's ideas and world view, particularly where the mapper observes from inside as a participant in a particular world view, taking in all views that comprise the environment of which the mapper's world view is one. (Doll, 1989, 247) The intensity of research and references is not as vital to the conceptual map. Graham's idiosyncratic map (Figure 1-B) falls in this conceptual category. Figure 1-A falls in the phenomenographic and conceptual map overlapping. It is phenomenographic because it qualitatively views the different ways in which people experience and understand the world around them while representing those experiences in a format conceptualized by the map's creator.

The third map type, the mimetic, simulates or imitates a reality. Their mimetic quality permits us to see in these types what Rorty (1979) considers a mirrored positivist reality. Of the three map types, mimetic maps have the potential to be geographic in nature. They indicate the location of a variety of social or cognitive phenomena not normally associated with geographic cartography. Mimesis as a property of modernism is noted by Huggan (1991) as "a cornerstone of Western culture" (125). While Huggan suggests mimesis "stabilized (or attempted to stabilize) a falsely essentialist view of the world which negates or suppresses alternative views which might endanger the privileged position of its Western perceiver" (126), we argue for a deconstructionist mimesity, a way of seeing how others view the world through mapped mimicry of their cultural perspectives. In its postmodern form, mimesis challenges stability and privilege by encouraging alternative perspectives. An excellent mimetic example is Eaton's (Figure 1-C) illustration of the mental images United States military officers have of other nations Eaton's map exhibits phenomenographic and conceptual characteristics, locating these characteristics on a perceptual geographic plane. Eaton's project asked military officers to utilize symbols to geographically locate other nations as well as indicate the size, population, and other conceptualizations the officers held of these nations. While the information requested in Eaton's study included size, population, etc., we consider that the requirement of mapping a geographic location creates a sub-group we call the geo-mimetic.

The mapper may use any word or symbol system to represent the mapped information. When symbols are used, combinations and varieties of shape, size, line width, or any variable may indicate meaning differences. Again, Eaton's comparative phenomenographic analysis effectively uses this iconographic method. (Figure 1-C)

Where Mapping Could Amplify the Thesis

We will now review some recent comparative research articles which illustrate how social cartography, had the method been available to the authors, could enhance research presentations. Because we believe the authors' knowledge of their material positions them as best able to determine the form and content of a map, we will not create maps for them. However, to illustrate our point, we will be bold in our use of their material to suggest maps we believe could enhance their presentations.

Clayton MacKenzie's (1993) interesting study of missionaries in a variety of historical contexts compares the short and long term educational, political, and economic results of missionary schools from perspectives including indigenous peoples influenced directly by the missionaries; these peoples' descendants; the various church organizations who sent missionaries to Africa, South American, and the Orient; and the European governments or monarchies colonizing those areas. MacKenzie's research offers substantial possibilities for phenomenographic and mimetic map types. A phenomenographic map might create categories illustrating reactions, experiences, and outcomes of missionary education from various perspectives. A mimetic map could use icons to show where missionary schools were located and their denomination affiliation. This information could be enhanced with icons showing education influences of the church, the colonial government, etc. Overall, these combinations of factors result in conceptions of positive or negative educational, social, and political outcomes, which could also be mapped.

Susan Rippberger (1993) argues for a shift to participatory interpretist education, "suggesting that each ethnic group be encouraged to find and use its own voice rather than allow nonminoirty professionals to speak for them" (57). She notes that "the emic, or insider's perspective, in educational research has remained untapped until recently" (57), but that there are also "risks inherent in an ideological perspective that promotes greater ethnic control over bilingual education" (59). Both concerns suggest a possibility for mapped enhancement of her argument. The insider's perspective as well as the risks of ideological perspective could be combined in a phenomenographic/conceptual map which would not only position the values and risks of participatory interpretist education, but to present the values and risks in a manner to show that the former outweighs the latter.

Ratna Ghosh and Norma Tarrow's (1993) article on professors' attitudes toward multicultural pedagogy also suggests a number of possible maps. The most revealing and relatively easily accomplished would present icons on a conceptual field, where the icons represented factors of multicultural perspectives (culture, race, gender, ethnicity, etc.), each sized accordingly with a professor's perspective on the issue's importance in relation to teacher education pedagogy. The map would be enhanced by locating these icons on a conceptual field isolating professors grouped by these same multicultural factors.

Geoffrey Partington's (1993) study, "Obstacles to Liberal Education in Australia," lends itself to a very structured phenomenographic mapping of the ways of seeing, similar to Figure 1-A. His astute classifications of education theorists suggests a map particularly useful for introducing students enrolled in foundations courses to the juxtapositions of ideas which have historically influenced education theory and practice. Another map would be a mimetic illustration of the various governments' rationales regarding their emphasis and perceptions of best or preferred curricula areas. This mimetic representation could as well serve to develop students' understanding of policy decision making.

Mark Lincicome (1993) discusses "coping with internationalization" in terms of Japanese education. He reports that "internationalization," according to B. Harumi, is a process that is not singular, but connotes numerous and varied interpretations and contexts. At the same time, R. Mouer and S. Yoshio suggest internationalization is seen by the Japanese as serving both national and international interests. This article could be strengthened by mapping the Japanese perspectives identified with the interpretations and contexts of internationalization, for example, economic and noneconomic, and overlaying on the map the national and international interests to be served. This mapped information could easily be constructed to the requirements of any of the three mapped types or the four overlapping types we have identified. The map we envision is, however, predominantly phenomenographic, and we chart it as such.

Liz Gordon (1993) immediately provides us with a mapping exercise when she writes "the basis on which market educational reforms can be understood as transnational, if not global, is as part of a solution to a common set of economic circumstances, including the falling rate of profit, the growth in multinational corporations, increasing national debt, rising unemployment, high levels of inflation and spiralling welfare costs" (281). These five economic circumstances as they affected Britain, the United States and New Zealand could be mapped, possibly in a time series, indicating changing circumstances and altered perspectives regarding market educational reforms. Here, again, a conceptual map using a variety of icons representing the five economic circumstances in terms of strength, policy influence, etc., would be an excellent choice.

Fiona Wood (1992) finds national policies exploit the affinity between "the technology base, export earnings, and intellectual skills" (293) creating a collaborative effort in the areas of research, teaching, and service between higher education and industry. Wood's article is researched and detailed so finely as to recommend a highly structured phenomenographic map detailing the relationships between any or all of those concerns taken from the article's first paragraph. Also, her discussion concerning the protection and ownership of intellectual property might be mapped phenomenographically, building the map's axis around poles of ownership, liability, industrial property and copyright. Pam Poppleton (1993) notes that the "interpretation of findings in a cross-national study is much the most difficult part of the researcher's task" (215). We identify with this concern, seeing interpretation as largely a problem of what criteria best situate themselves in terms of understanding and mapping. Poppleton quotes Melvin Kohn who realized "a necessary first step is to try to discover which of the many differences...are pertinent to explaining the differences in social structure or in how these social structures affect people's lives" (Kohn in Poppleton, 215). With regard to mapping possibilities, Poppleton has made our task relatively easy. She notes her arguments "will be grounded in teachers' perceptions of their work" (216), and that the study "was carried out in England, the USA, Japan, Singapore and West Germany" (216), noting, too, that these countries "varied along a number of important dimensions: size, demography, political ideology, and religion, though all can be described as having modern industrial enterprises and capitalist economies" (216) and were chosen "because researchers in each of the countries were concerned about aspects of the supply, recruitment, selection and training of secondary school teachers" (216). These factors suggest a mimetic map using icons representing the teachers' perceptions in the categories Poppleton discusses: teaching as work; teaching as career; teaching as pedagogy; teaching as professionalism.

It should be evident that any number of factors presented in comparative research articles can be conceptualized as material recommending the creation of

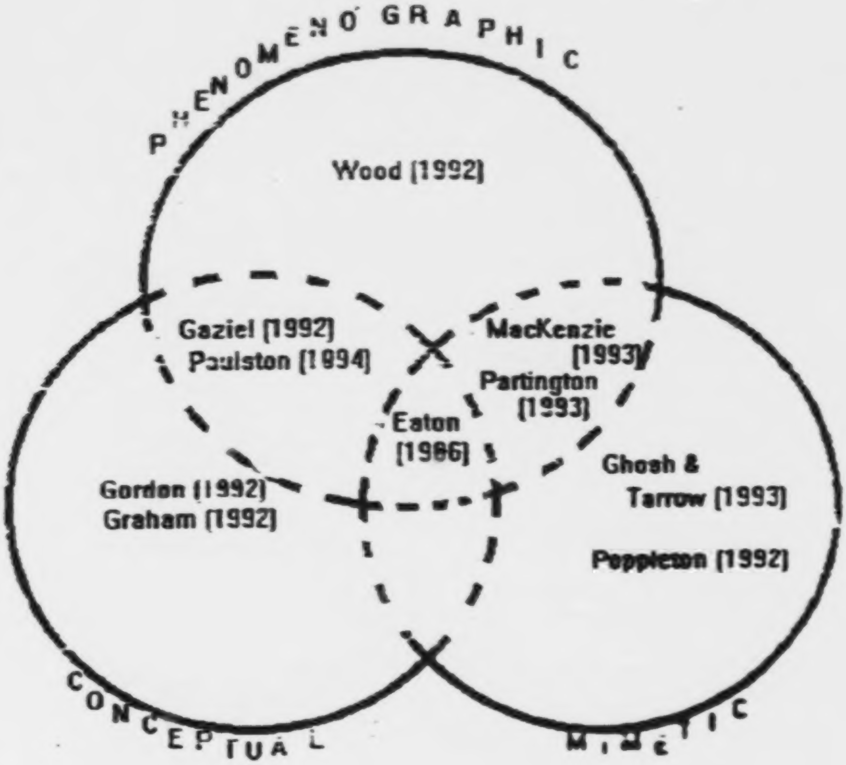

Figure 2: A conceptual map locating texts in a field of map types.

a social cartograph. We have illustrated in Figure 2 our map choices for these articles, locating the cited articles (as well as Paulston, Graham, and Eaton) within the context of the three map types we have identified with social cartography. Figure 2, of course, can be seen as a conceptual map because it develops perceived relationships within or between the categories of phenomenographic, conceptual, and mimetic on a two dimensional space.

Conclusions

Our social mapping project is neither a rebuttal of modernism nor a headlong plunge over the postmodern cusp. We agree with Val Rust's observation that metanarratives continue to have an important place and societal influence, as well as with Habermas that modernity is not a failed project. What we envision is a move toward encompassing the perspectives and methods we can find which serve to advance both knowledge and understanding. To replace one totalizing perspective with another would not improve social and comparative research but create a new focus for argument, misunderstanding, and exclusions. Social cartography's method, however, decidedly favors the postmodern and the study of cultural clusters' narratives and influences. By using maps as a part of our comparative studies we may provide an inside view, a visual dialogue of cultural flow and changing influences appropriate for future work in comparative education, particularly in those instances where cultural values and differences are revealed by competing knowledge claims. Social cartography with its rejection of totalism offers a field on which to arrange competing knowledge claims revealing their interrelatedness and, subsequently, developing spheres of understanding.

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MAPPING/REMAPPING DISCOURSE IN EDUCATIONAL POLICY STUDIES

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APS Conceptual Mapping Project

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ABSTRACT

In this essay we demonstrate the origins, rationale and utility for social cartography as a process capable of portraying the interrelations of truth and value choices in the field of educational policy studies. We focus on the particular domain of environmental education-related discourse, and present both a primary conceptual mapping project and a reflexive critique of our work, providing a second mapping, or remapping, of the terrain. We explain the interrelations of the discourse, and also disclose our own interactions and our interactions with readers to demonstrate further how the intertextual field opens the heuristic circle to include readers as active participants in the process. Facing both the promises and the problems of social cartography, we argue that this is a methodology which attends to the spatial dispersion of ideas in such a way that their value and power relations are made explicit. We expect that the utility of this project and this process will be realized through the appropriation of mapping techniques and approaches by our readers. Finally, we offer reflections and conclusions about the limitations, as well as the potential, of social cartography as a useful methodology for attending to postmodern considerations within the realm of educational policy studies. While we hope that educators will utilize this process to see from a diversity of perspectives the truth and value positions that often implicitly inform their pedagogical choices, we acknowledge difficulties inherent in the process, and seek feedback from practitioners in the field.

A clash of doctrines is not a disaster; it is an opportunity.
Alfred North Whitehead; *Science and the Modern World*, 1925

Education is a kind of continuing dialogue, and a dialogue assumes ... different points of view.
Robert M. Hutchins, *Time*, 8 Dec. 1952

What does the postmodern turn - specifically, the decentring of knowledge and of the subject - mean in terms of making human sense for ourselves and for/with our readers as comparative educators constantly facing and explicating difference? The emergence of social cartography as a methodology for comparative educators and educational theorists speaks to this dilemma, heralding the dawn of an age of mutual respect and consideration,(1) and of giving voice to difference on a leveled playing field of perceptions.(2) In Paulston (1996), both difference and unification find their place of valuation within this postmodern turn:

> Because social cartography allows the comparison of multiple realities and contested codes in a representational construct, it also has potential to serve as a metaphorical device for the provisional representation and iconographic unification of warring cultures and disputatious communities. Every social map is the product of its makers and open to continuous revision and interrogation. In the process of mapping, the subject is seen to be constituted at the shifting space where multiple and competing discourses intersect. This view advances neither the self-sufficient Cartesian subject of Western humanism nor the radically de-centered Baudrillardian subject seen by extreme poststructuralism. Instead, the mapper is articulated around a core of self that as Flax (1990) argues, is nonetheless differentiated locally and historically. Mapping, in this view, makes possible both a way of understanding how sliding identities are created, and how the multiple

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> connections between spatiality and subjectivity are grounded in the contested terrain between intellectual communities.(3)

Paulston sees that comparative education shares with other fields "a common interdisciplinary pursuit of cultural theory and situated knowledge generation processes, as well as the more traditional cross-cultural comparison of national practices".(4) It is these 'situated knowledge generation processes' which we take up in this paper, exploring the process as conceived by the second author for purposes of developing a postmodern-sensitive methodology useful to comparative educators, and utilized by the first author to make sense of a policy dialogue currently in formation around themes and issues of environmental education (EE) -related discourse.

Acknowledging our differences, we speak here consensually at times, and as first or second author at other times. Therefore, this research report represents a mapped journey which details both the mapping process and rationale, on the one hand, and the situated ways of knowing which are evolving through the EE-related dialogue itself, on the other.

Our intention in this report is to detail: 1) the origins of the work and rationale for social mapping and its possibilities in general; 2) an exploration of EE-related discourse as an ongoing dialogue, and the situated ways of knowing which are evolving within that dialogue; 3) a narrative of the problems and promises of the social cartographic process through disclosure of its inner workings within this project; 4) an exposition of further indications for mapping/remapping EE-related dialogue; and 5) reflections and conclusions about the usefulness of such a mapping project, as we created our own dialogue and informed each others' meaning constructions around this discourse.

Origins of the Work

> ..I believe that the anxiety of our era has to do fundamentally with space, ...a great deal more than with time. (Foucault, *Of Other Spaces*, 1986, p. 23)

What is Foucault's sense of spatial dispersion about, and how does it serve as an origin of this work? In his 1972 work, *The Archaeology of Knowledge*, Foucault, following work in the history and philosophy of science by Bachelard and Canguilhem,(5) among others, described in these words the then emerging trend in the history of ideas or knowledge, among other disciplines, as a time of transitional thought:

> ...attention has been turned... away from vast unities like 'periods' or 'centuries' to the phenomena of rupture, of discontinuity. Beneath the great continuities of thought, beneath the solid, homogeneous manifestations of a single mind or of a collective mentality, beneath the stubborn development of a science striving to exist and to reach completion at the very outset, beneath the persistence of a particular genre, form, discipline, or theoretical activity, one is now trying to detect the incidence of interruptions. (6)
>
> And the great problem presented by such historical analyses is... one of division, of limits; it is no longer one of lasting foundations, but one of transformations that serve as new foundations, the rebuilding of foundations. What one is seeing, then, is the emergence of a whole field of questions... by which this new form of history is trying to develop its own theory... (7)

Arguing that "history is the work expended on material documentation," and that "history is now trying to define within the documentary material itself unities, totalities, series, relations," Foucault goes on to state that "history is one way in which a society recognizes and develops a mass of documentation with which it is inextricably linked." If history, then,"'in its traditional form, undertook to 'memorize' the *monuments* of the past, transform them into *documents*, and lend speech to those traces which... are often not verbal, or which say in silence something other than what they actually say," Foucault sees that "in our time, history is that which transforms *documents* into *monuments*," and "deploys a mass of elements that have to be grouped, made relevant, placed in relation to one another to form totalities," thus aspiring to "the condition of archaeology" (8). This 'mutation,' according to Foucault, has had a stunning effect:

> it has broken up the long series formed by the progress of consciousness, or the teleology of reason, or the evolution of human thought; it has questioned the themes of convergence and culmination; it has doubted the possibility of creating totalities. It has led to the individualization of different series, which are juxtaposed to one another, follow one another, overlap and intersect, without one being able to reduce them to a linear schema. ...in place of the continuous chronology of reason, ...there have appeared scales that are sometimes very brief, distinct from one another, irreducible to a single law, scales that bear a type of history peculiar to each one, and which cannot be reduced to the general model of a consciousness that acquires, progresses, and remembers. (9)

What Foucault details here, within the parameters of a history of knowledge, is the disruption, or deconstruction, of a history based on a linear notion of progress. For Foucault (and others sensitive to this transformation), this has led to a new set of problems for the general (as opposed to the traditional) historian of knowledge:

> The problem that now presents itself... is to determine what form of relation may be legitimately described between these different series; what vertical system they are capable of forming; what interplay of correlation and dominance exists between them; what may be the effect of shifts, different temporalities, and various rehandlings; in what distinct totalities certain elements may figure simultaneously; in short, not only what series, but also what 'series of series'... A total description draws all phenomena around a single centre - a principle, a meaning, a spirit, a world-view, an overall shape; a general history, on the contrary, would deploy the space of a dispersion. (10)

The task of explicating (or excavating) the space of a dispersion is complexified by the specialization, or fragmentation, of knowledge communities and their subject matter. Further, those following this sensibility, whose varying approaches are generally gathered under the umbrella term postmodern deconstruction, work within a milieu that is neither well understood nor apprehensible through prior research forms or agendas. Fulfillment of the promise of apprehending dispersion requires access to new modes or tools for excavation. Further, acceptance of this approach has not come without difficulty. Foucault's caution pertains as much today as it did in 1972:

> Even now... it has been neither registered nor reflected upon... It is as if it was particularly difficult, in the history in which men [sic] retrace their own ideas and their own knowledge, to formulate a general theory of discontinuity, of series, of limits, unities, specific orders, and differentiated autonomies and dependences. As if... we felt a particular repugnance to conceiving of difference, to describing separations and dispersions, to dissociating the reassuring form of the identical. ...As if we were afraid to conceive of the *Other* in the time of our own thought. (11)

What does this seeming repugnance, this fear of otherness, produce in response to postmodern sensibility? How does it play into the construction of new venues and research processes for those laboring within this sensibility to see and understand from within a spatial disperson the interrelations between ourselves and 'others'? Foucault is clear on the response:

> The cry goes up that one is murdering history whenever... one is seen to be using in too obvious a way the categories of discontinuity and difference, the notions of threshold, rupture and transformation, the description of series and limits. ...But one must not be deceived: what is being bewailed with such vehemence is not the disappearance of history, but the eclipse of that form of history that was secretly, but entirely related to the synthetic activity of the subject; what is being bewailed is the 'development' (*devenir*) that was to provide the sovereignty of the consciousness with a safer, less exposed shelter than myths, kinship systems, languages, sexuality, or desire; what is being bewailed is the possibility of reanimating through the project, the work of meaning, or the movement of totalization, the interplay of material determinations, rules of practice, unconscious systems, rigorous but

> unreflected relations, correlations that elude all lived experience; what is being bewailed, is that ideological use of history by which one tries to restore to man everything that has unceasingly eluded him over a hundred years. (12)

Postmodern sensibility, from Foucault's view, presents a critical threat both to the illusion of stability and to the illusion of a foundational basis for change. As such, it is subject to villainization as though the sensibility itself, by destroying prior illusion, could destroy either progress or hope of progress. Those who labor within this sensibility encounter themselves as 'other,' and benefit from that encounter, particularly as the encounter itself brings to life new venues for research, and new research processes -- the sites and tools of excavation. A kind of watchfulness is necessitated by the process, however - one which demands that we be overseers of ourselves in the moment where we gaze into the looking-glass of otherness.

Social cartography represents an effort to excavate the elusive through a recognizable, if not definable, methodology which is based on an anti-foundational perspective. The task to which we now turn is to explain this methodology, which the second author has conceptualized as a means of bringing into formal discourse the interplay of many voices as a visual dialogue. (13) For the first author, this methodology additionally constitutes a contemplative process, both elusive and alluring, but nevertheless highly useful for conceptualizing the abstract variances within the intertextual field of educational policy studies. By way of illustration, we will focus on one part of this vast terrain, that is to say, EE-related discourse.

Social Cartography as Postmodern Methodology

> We are creating and using up ideas and images at a faster and faster pace. Knowledge, like people, places, things and organizational forms, is becoming disposable.
>
> Alvin Toffler, *Future Schock*, 1970

Before focusing on EE-related discourse, however, we attend to social cartography as a means of addressing difference within disputatious communities in a way that allows for healthy dialogue.(14) In this section, we explain the rationale for admitting postmodern considerations into the space of comparative education as one such disputatious community. We offer this rationale in preparation for looking at the practical use of social cartography as a method for exploring the conflicted terrain of EE-related discourse.

Calling for postmodern theories to be applied within the discourse of comparative education, Val Rust (1991) reasoned that the deconstruction of universal metanarratives (stories which aspire to tell the 'one great truth' from which meaning can be derived or within which meaning should be constructed) - such as positivism or Marxism - were necessitated by their own natures, characterized as "totalizing, standardizing, and predominating." (15) Seeing postmodern theory as a space from within which comparative educators might address "the history of modernist society and culture as it was ingrained and justified by a world view obsessed with focusing on time and history." (16)

> Rust entreats educators to relocate into this space, to extract from modernity the metanarratives to be dismantled, metanarratives containing the multiple small narratives previously hidden in the invisible space of modernist society. The small narratives that Rust suggests we draw our attention to can be the focus of comparative mapping efforts in a reflective and self critical postmodern social science. (17)

While Rust turns our attention to these 'small narratives' (mininarratives), focusing on spatial aspects of comparative education -- the question of whose stories get told, Mouat (1996) has put the matter a little differently, drawing our consideration to the manner of representation:

> The PostModern era began with a dawning awareness that "reality" is composed of disconnected fragments. As early PostModerns sought reconnection they discovered that the concrete representation of interrelationships between and among fragments often eludes expression. As the struggle to discover and express interrelationships intensified it became apparent that the *abstract* representation of interrelationships is often possible when their *concrete* representation is not. Therefore, social cartography as mapping abstraction arises initially as a vehicle through which to express in highly condensed, abstract form, the interrelationships between and among elements of systems which are not amenable to concrete description. (18)

In Mouat we find a concern that moves us away from the locus of the story towards the manner of representation, and asserts that the abstract is more clearly the object of a social cartographic approach. What is the purpose, then, behind the mapping of all of this fragmented abstraction? The concerns of urban cartographer Edward Soja play into Paulston & Liebman's rationale: space may be "claimed by cultural clusters" so that "situating the whereness of cultures and the events driving their realities are a better framing choice for the questions we ask and the answers we receive as we pursue meaning in the postmodern world." (19) The mapping of abstraction leads to the inclusion of cultural clusters or sites of knowledge not ordinarily seen or given voice within the research domains of modernity fostered by, or emerging in response to, former approaches based on metanarratives:

> Postmodern space is the research domain containing the objects to be mapped -- the multiple social ideologies and convictions arising from modernism. The postmodern researcher in education, who may also become a postmodern cartographer, prizes both the space within the social milieu and the possibilities for a more inclusive mapping of that space, motivating the creation of multiple and inclusive maps. (20)

The research domain is thus opened to become more inclusive and subjects itself to close reading as a check on its own tendency to establish itself as a new metanarrative. Thus the map as a heuristic device not only represents abstractly what may defy concrete representation, opening a research domain that may become increasingly inclusive, but draws the reader into the intertextual field of discourse as well:

> This heuristic map discovers intellectual communities and relationships, illustrates domains, suggests a field of interactive ideas, and opens space to all propositions and ways of seeing in the social milieu. What appears as open space within the global representation is space that can be claimed by intellectual communities whose discourse is not yet represented on the map. (21)

> Readers may question whether the depiction is accurate, whether the allocation of space is appropriate, and whether the genealogy and relationships suggested... have developed or are developing in the directions the mapper indicates. ...the map is available for dialogue; if a reader disagrees, she or he need only redefine the space. (22)

The intertextual field of a particular domain now expands in such a way that the heuristic circle is opened inwardly, for introspection, and outwardly, for greater dialogue, more diversity of perspectives, and an ongoing exegetic process, or close reading, that may pave the way for further inclusion. No way of seeing is silenced, but neither is any privileged, and all are problematized! Instead, the site of knowledge for a particular domain is excavated to reveal multiple layers and meanings observed from diverse points of view, or ways of seeing, as illustrated in Figures 1 and 2 below.

Finally, mapping is portrayed "as a kind of cognitive art, or 'play of figuration' to help orient educators to knowledge communities and their cultural codes, and to reinscribe earlier modernist vocabularies into post-modern ways of seeing and representing educational change knowledge." (23) The result is a "distinct mode of visual representation" where space is used to represent a spatial dispersion that offers, "when combined with discourse analysis, a system of possibility for new knowledge" (24):

> Comparative education is now portrayed as a mapping of the intertextual weavings of diverse discourse communities rather than the objectified images presented to the world in earlier foundational texts. The strength of social theory in the field today is in fact firmly grounded in this very multiplicity of its perspectives and tools known through intertextual composition. (25)

This cognitive art form is one which both subjects itself and models for others a distinct manner of being-in-the-world, one which is sensitive to the epoch of space and to the continuous construction of knowledge from within many sites and through many perspectives:

> It would seem that the time is propitious for comparative educators to consider how a cartography of relations might help us move beyond our present Cartesian anxiety and conservative utopianism into the next millenium. I believe that social cartography with its deconstructive view of all modes of representation and with its ludic openness to new ideas and ways of seeing can help us make this intellectual journey. (26)

What is the usefulness of this conceptual mapping effort -- this intellectual journey -- to practitioners laboring in the intertextual field of EE-related discourse? We acknowledge that the aletheistic utility of mapping, while serving to reveal 'intertextual interweavings within diverse discourse communities,' doesn't change anything, but also offer that the more participatory it is, the more useful it will be for opening up possibilities for change. We expect the visual portrayal of patterned interrelations within the discourse to be useful to educators in making choices which are informed by the experience of seeing from a diversity of perspectives.

EE-Related Discourse and Social Cartography

> In the industrial states environmental concerns are increasingly being felt as threats to employment and economic growth. Even some environmentalists

> have announced that "the ecological wave" is spent. I would rather say that such waves are growing, but that the continued policy of economic growth generates increasing toughness of resistance against those waves. When fighting this resistance one of the many assets would be a clear grasp of the philosophical issues involved. Change of... policy requires change of value priorities.
>
> Naess, 1981, p. 1

In this section we examine what a 'cartography of relations' means in practical terms for EE-related discourse, and how such an 'intellectual journey' might prove useful to comparative educators. Rust's exhortation that postmodern considerations such as the deconstruction of metanarratives and problems of the Other be given serious attention in the field of comparative education (27) provides at the least a vague outline of where we might begin such a journey. We begin by considering the nature of environmental issues and concerns in relation to these considerations, then move on to the practice of social cartography as a means of visually presenting/re-presenting an EE-related policy dialogue.

Teachers who address environmental issues are addressing both external images of reality, affecting students' conceptions of the natural world and their place in relation to it, as individuals and as citizens of local, state, and global spheres; and internal images of reality, affecting students' conceptions of their relations within that natural world, both as human beings and as species beings. Issues of alterity and identity related to sense of place lie at the heart of environmental discourse. Comparative educators who address these issues are addressing problems of the Other, explicitly or implicitly. We seek to make that facet of the dialogue explicit by making it visible.

Further, any curricular approach to EE emanates from some way of seeing, privileging it over some other. Any learning that takes place commits to some way of seeing which may obliterate others from consideration. Within this scenario, truth and value choices are politically potent and culturally charged, and the role played by supporting metanarratives, or the selection of mininarratives -- i.e., the question of whose stories get told -- resounds with power. We argue that an inclusive, visual circle of dialogue which incorporates all voices may tend to deconstruct, delimit, or redistribute this power over construction of meaning in a purposeful way.

As for the practicality of such an undertaking, we argue that teachers and students wrestling with such conceptions can only benefit from exposure to multiple perspectives and from a conceptual organization of the various insights and concerns that they offer for consideration. This need for a way of organizing multiple perspectives is mandated by the explosion of EE-related discourse as an ever-expanding intertextual field. A diversity of views explores new ways of seeing relationships between humans and the rest of the natural world, humans and science-and-technology communities, humans as social beings in enclaves variously competing with each other for resources or attempting to work together to protect an increasingly ravaged planet. What has resulted is a panoply of ideas, perspectives and correlated applications from which educators must select, often without reference to any overall view of the effects or possibilities of selection. (28)

We argue that the methodology of social mapping as it makes visible sometimes bewildering relationships between old and new ways of seeing within EE-related discourse may serve to clarify truth and value choices within this discourse and to orient educators in terms of the diversity of available perspectives within its vague and rapidly-expanding boundaries. We propose and undertake a mapping and remapping of EE-related discourse that can begin to make the policy dialogue visible and serve as an illustrative avenue for a close reading of any one way of seeing the dialogue itself.

This cartography of ideas - the mapping of voices of vision within the discourse - serves, as well, as a ludic approach to truth and value conflicts, modeling a 'playful' way of cognitively resisting any metanarrative (including its own) which would seek to silence others.(29) The nature of environmentalism as a social movement involving cognitive praxis -- a constant exchange of lifestyle and identity within public spheres of struggle (30) -- calls for a ludic approach to this struggle if resistance to metanarratives which would silence some ways of seeing while privileging others is to be realized.

In the next section, we present a conceptual mapping of sites of knowledge, or situated ways of knowing, embodied in EE-related discourse. The mapping represents a way of seeing the philosophical issues involved -- i.e., the truth and value choices that emerge within the policy dialogue -- and a way of approaching the discourse so that the inclusion of mininarratives (outsider voices, e.g.,) (31) and creative interaction with metanarratives (the 'reality dictates' of rational science, e.g.) are given full ludic play. We invite the reader to join us in this intellectual journey, to read closely along with us the power and value relations of meaning within the policy dialogue (including our own) and to determine what is useful and worthy of consideration.

Sites of Knowledge in EE-Related Discourse

How do we include, within the parameters of a map, outsider stories as texts which have an equal claim to credibility as claims made by the stories, or texts, of rational progress through scientific inquiry that have fueled industrialization, development and civilization as we know it in the Western world? How do we approach a basic articulation of a multiplicity of priorities of valuation, action and ontological perspectives pertinent to EE-related discourse? We argue that worlds are discursively constructed, arranged and redefined through the use of language, or texts, and that they can therefore be discursively reconstructed, rearranged and redefined continually through the constructive and deconstructive power of texts. Ludic play represents resistance to control by metanarratives of truth and power, and constitutes, in part, a personally creative world orientation which we use here to reveal space at the table of conversation for all voices and options, including our own.

For our purposes here, we seek to map the policy dialogue keeping four main considerations in mind: (1) the issue of whose stories get told; (2) heeding abstractions which situate the whereness of cultures; (3) maximizing the inclusive potential of the mapping project; and (4) developing, refining and reconstructing on a continuing basis the aesthetic promise of mapping as a cognitive art form. (32)

We present the intertextual field of EE-related discourse as an open field -- an orb of issues and concerns which overlap and intersect, the meeting of many stories at boundaries not yet fully explored -- making space for a re/presentation (or series of re/presentations) of current, emerging and age-old dialogues that excludes none. Traditional sites of knowledge (texts deriving from the narratives of science and humanism, e.g.) meet emerging voices of vision (such as outsider voices), which may problematize prior parameters and their constraining influence, sharing space in a dispersion which makes room for new ways of seeing, new knowledge communities and new directions of inquiry, while not ignoring tradition.

The discourse reveals two aspects of concern: *risk and relationship*. (33) Stories told within the aspect of risk speak of the effects of human interactions with nature and address issues of how best to mitigate these interactions in order to ameliorate the risk of further environmental degradation. Stories told within the aspect of relationship speak of the effects of meaning on these interactions, addressing concerns over how meaning may be constructed or reconstructed to address further human interactions with nature.

Two further dimensions are apparent in the discourse and appear to intersect both aspects. The first consists of a particular vision of reality and locates its basis in either a materialist sense of the universe or a sense of the universe reflecting some notion of immanence. This dimension approaches the perceptual divide between the aspect of risk and the aspect of relationship. The second consists of a particular valuation of the human being, either from an anthropocentric way of seeing human/nature relations or an ecocentric way of seeing these relations, a debate which has sharpened and become more clearly articulated during recent decades. The intersection of these dimensions forms four interconnected, interrelated domains of inquiry: ecology, deep ecology, scientific humanism, and what the first author terms theology (a theology of human/nature relations). Ecology focuses on the whole community of beings, living and non-living, and their interactions as equals, while deep ecology favors higher gestalts that look at ecological issues from a deeper questioning of meanings of human/non-human existence. Scientific humanism focuses on the community of humans and their interactions with each other and the rest of the natural world in relation to environment, while theology looks at the deeper questioning of the meanings of human existence and of the character of the natural world as a whole.

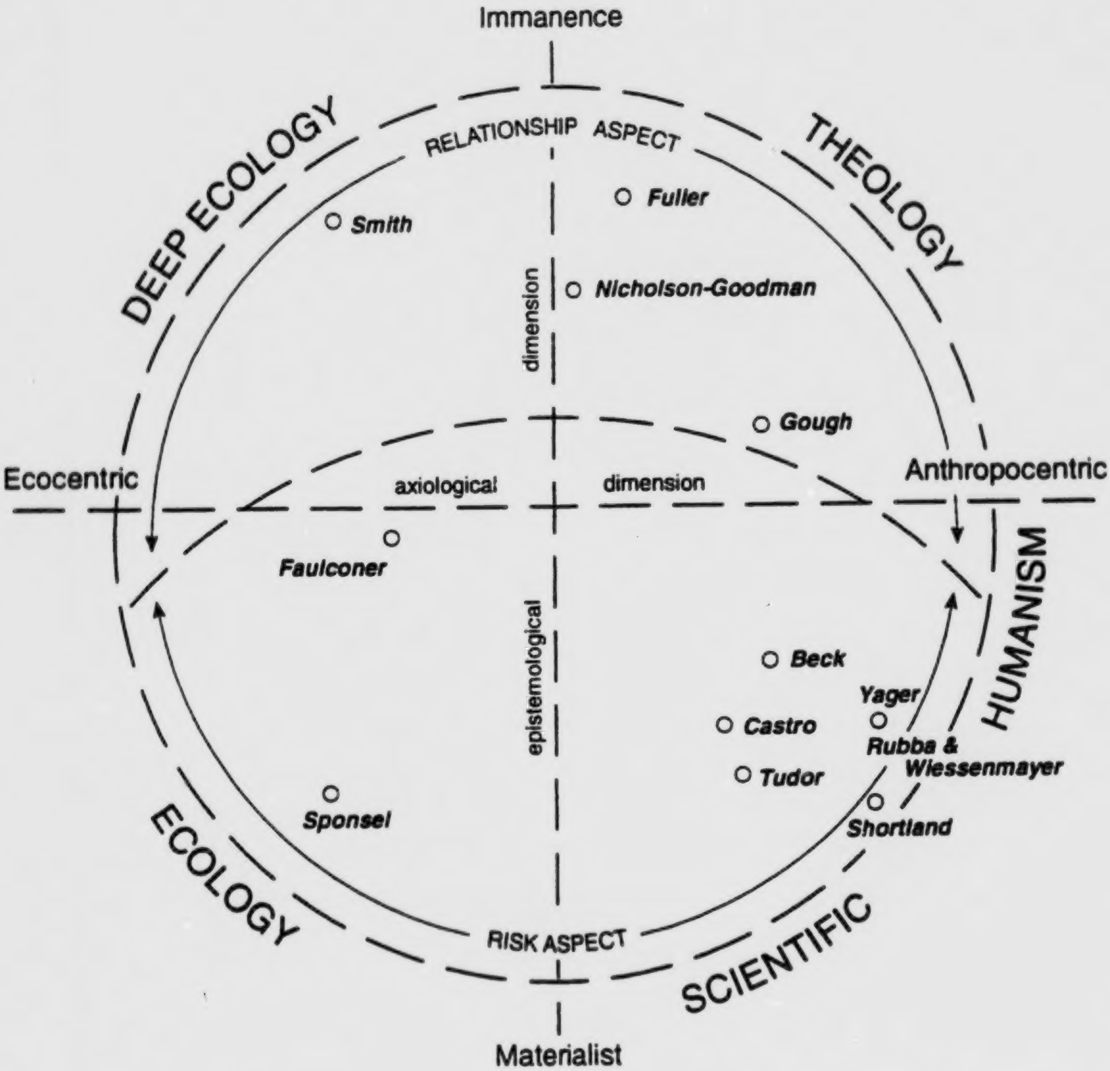
We present here a summation of texts (see Table 1) utilized in a conceptual mapping of EE-related discourse. (34) We name each text according to a perspective which it appears to articulate, then locate it based on the choices which it advocates. The mapping of these texts, then, articulates their internal relations as well as the contours and juxtapositions of the intertexual field itself. It is of some importance to note that texts may be located within the same domains of inquiry because they reflect ways of knowing or seeing that attend to common truth and value choices, but that they may not necessarily *agree on desired outcomes.*

This manner of excavation led to the construction of Figure 1 (see Figure 1). The figure itself was negotiated through a dialogue between the first and second authors, a matter which will be dealt with in detailing our interactions in the next section. For our purposes here, we simply list the perspectives which led to the construction of the figure in an effort to illustrate the correlations within the figure which inform the juxtapositions

Table 1. Summation of EE-Related Texts for Figure 1

Text	Perspective	Characteristics/Advocacy
Faulconer 1993	historical	EE as epistemological evolution towards focus on ecology, deep ecology/nature-based valuation
Shortland 1988	science literacy	ignores EE; science as icon of well-being for culture and polity/science as evolving knowledge, scientist as imparter of truth and knowledge
Rubba & Wiesenmayer 1988	Science-Technology-Society (STS)	wants to provide knowledge, skills and attitudes for responsible environmental behavior/expertise of scientists as humanists
Yager 1990, 1993	STS	student-centered experience of science as applied knowledge for real-world problems/expertise of scientists as humanists
Beck 1992	radicalized science	questions science-owned knowledge; risks and hazards product of scientism/critique of science
Tudor 1991	sustainable development	new world order mandates global resource management, education for world federation/EE for sustainable development
Sponsel 1987	cultural ecology	equilibrium vs. disequilibrium social order as problem/ population, consumption to be nature-based
Castro 1993	differential development	risks created, debt owed by consumer societies/ right of Third-World nations to develop
Gough 1993	fictive narrative	science, EE as poor storytelling practices/need for new language to sing new nature relations into being
Fuller 1988	aesthetic	erosion of immanence led to mindless sense of nature and humans/return to aesthetic response
Smith 1993	resacralized nature	reconstruction of human sense of meaning in cosmos/ nature-based sense of place for reconstruction

Note: For further elaboration of texts, see Nicholson-Goodman (1996), *A Ludic Approach to Mapping Environmental Education Discourse*. In Paulston, R. (ed.), *Social Cartography: Mapping Ways of Seeing Education and Social Change*. New York: Garland.



Nicholson-Goodman (1996), *A Ludic Approach to Mapping Environmental Education Discourse.* In Paulston, R. (ed.), *Social Cartography: Mapping Ways of Seeing Education and Social Change.* New York: Garland, p. 313.

of the domains of inquiry. Texts illustrate a wide range of difference and, because the mapping is a conceptual work, and not a phenomenographic work (which would have required a far greater breadth and depth of research) (35), simply indicate interrelations of the larger discourse itself.

Ten perspectives emerge to represent the fuller spectrum of EE-related discourse. Each text operates as a voice in the dialogue, and the relative truth and value advocacies derived from the texts form the interrelations of the dialogue, and therefore of the map. A further question emerges here: How do we avoid the dilemma, having constructed an initial conceptual mapping of the dialogue, of establishing a new metanarrative of EE-related discourse? In order to address this problematic, it is necessary first to look at the interaction between first and second authors in the map's 'construction,' and then to consider a possible remapping based on an additional consideration of perspectives.

Interrelations of the Project

In this section we provide a narrative of the interaction between the first and second authors, and of the interaction between readers from the field of educational policy studies and the mapping project itself. By narrating these interactions, we offer readers of this report an opportunity to gain insight into value and power relations of the text, and to perform their own close reading from a position informed by an understanding of those interactions.

As with any text, this study has a subtext, or an inner life, not readily apprehended by the reader. The mapping of meaning performed here is the result of dialogue and collaboration between the two authors. The selection and reading of texts of EE-related discourse may have initiated with the first author, but this has since become a collaborative sharing of information and outlooks in the field. The eliciting of their essential truth and value choices was the province and concern of the first author, while the conceptual map produced from this activity (the more elaborate exposition of which is the subject of further work) (36) was produced by a collaborative effort in the form of a negotiated rendering.

We discussed, in this effort, the dynamic elements of the interrelations of the mapped texts: the second author problematized and challenged the aspects themselves, *risk* and *relationship*. On these aspects of the intertextual field the first author was quite clear, as the texts articulate these aspects profoundly. The domains of inquiry delineated here (simply referred to as 'fields' elsewhere) (37) -- ecology, deep ecology, scientific humanism, and theology -- were also challenged, with essentially the same result. The second author problematized the inclusion of the notion of immanence as the polar opposite (or 'other') of materialism. Again, the first author was resolved, based on the discourse itself, that this was an appropriate characterization of the dispersion of truth choices, although it must be allowed that texts within this aspect may reflect a number of options in this regard, ranging from acknowledgment of the possibility of immanence to an outright embracing of immanence as *the* truth choice. This seems reasonable, since within the risk aspect, texts may reflect the same range of options, from a simple refusal to consider any truth choice other than a materialist world to an outright embrace of the material world as the only reality. The notion of the immanent as defined by *The New Webster International Dictionary* (1972, p. 478) is: 'remaining within; indwelling; inherent; *philos.*, taking place entirely within the mind; subjective; *theol.*, of God, pervading the universe. The apparent dichotomization of reality into materialism and immanence parallels, then, truth choices which range from objective to subjective to something beyond either (the within/beyond). The former framing was chosen because the language of the texts was more clearly approached through this framing.

A visual depiction was more easily apprehended by the second author, who renegotiated the map the first author had drawn from the discourse, which was complex and 'muddy' compared to the 'new' map. For the second author, it was clear that the intersection of the two dimensions formed the core of the map, and that the surround needed to be a simple geometric figure. Simpler to read and clearer in its outline of the dimensions involved, we agreed upon this mapping, which was then elaborated just a bit more by the first author. First, the arc shape which delineates the two aspects, for instance, was chosen to reinforce the use of the astronomical sense of dichotomization, as an eclipse of one aspect of the orb while the other is in view (thus avoiding the logical, and problematic, notion of a distinct separation or opposition) -- problematizing not the orb of EE-related concerns itself, but the human perceptual problems that eclipse our vision. Second, the surround was broken from a closed circle to a punctuated one, allowing space for further opening of space either in later work or by others.

A series of presentations of this mapping effort led to some interesting further considerations resulting from input by readers. In the first presentation of the work it was noted that the map was very 'Paulstonesque,' meaning that it was based on the idea of quadrants, prevalent in the second author's earlier maps. This led the first author to present a brief narrative about what a four-directional circle represented to her, and helped illumine more of the personal meaning that connected her with this particular rendering. (38) At successive presentations, the map was seen variously as a scattergram, a device for measuring texts (not only within the dimensions, but also along its 'axes') and, finally, a *model* for truth and value choices. None of these views corresponded with our perceptions of the map as a way of opening up a dialogical space, but were valuable nevertheless for comprehending the inclusion of the reader in the hermeneutic circle.

The second author's continual assistance with further explorations of more current work on EE-related discourse and of mapping-related discourse as well, has served additionally to increasingly open out the space of dialogue between us and to keep our work current, reflexive and controversial in many other ways not readily apparent here. The modeling of this manner of research has inspired a sort of theoretical courage that was new to the first author.

The remapping of the discourse, the elaboration of which follows in the next section, is based on the notion that our original conceptual mapping project represents just one way of seeing the discourse, and that, in order to deprivilege our own sense of meaning, the project needs to continue to open out to new ways of seeing that discourse, and therefore new mapping projects which reach for wider proportions and more inclusive research agendas.

Indications for Remapping EE-Related Discourse

No one way of seeing within EE-related discourse can claim privilege over others, not even our own. How might we avoid the pitfall of constructing a map that becomes its own metanarrative? We do so by suggesting an alternative mapping -- a remapping -- and by extending an invitation to our readers to construct their own maps and perform a close reading of this report. To deprivilege the mapping illustrated in Figure 1,(39) we re-examine EE-related discourse as it is embodied in a particular disputation within the policy dialogue. Our goal is to reach for wider proportions of the discourse than those considered in the first conceptual map, constructing a second map to embody a more inclusive research agenda.

This remapping of EE-related discourse might, we argue here, address the local/global locus of vision as a dynamic that is often forefronted in the discourse. This dynamic attends both to consciousness of the planet and to the 'real' sites within which we are accustomed to living, changing the sense of meaning of both. Just as our lived realities have sets of relations, so do our sites of knowledge, or situated ways of knowing. The purpose of remapping EE-related discourse relative to the local/global dynamic has both a social theoretical goal -- namely, to open out this particular aspect of the policy dialogue to reveal truth and value choices often presented only implicitly -- and a pragmatic goal -- to clarify those truth and value choices so as to orient practitioners to the effects and possibilities of selection.

We now pay particular attention to two dimensions of this dialogue. The first is a transitional phase in human self-knowledge, represented by a continuum with our human sense of ourselves as species beings at one pole, and our human sense of ourselves as social beings at the other. This continuum expresses an axiology of community. The second dimension is a transitional phase in the societal ethic surrounding social change, represented by a continuum with an ethic of progress at one pole, and an ethic of uncertainty at the other. This continuum expresses an epistemology of social development (see Figure 2). What results is a coherent and visible representation of value and power relations within the intertextual field of EE-related discourse *informed specifically by the policy dialogue of local/global relations within that dialogue.* Mapping these relations provides us with a strong sense of the 'lay of the land' and of coherent terrains within that discourse. This map further opens out to a characterization of *human/social responses to nature* implicit in the fields formed by the intersections of the two dimensions: control, submission, awe and reconstruction.

The control response approaches environmental problems and concerns from the point of view of a human prioritization and domination of material realities within human and non-human realms of being; the submission response approaches them from the point of view of a nature-dictated prioritization and domination of material realities within human and non-human realms of being. These are notably *reactive responses* belonging to the risk aspect. The awe response approaches questions of meaning of human/nature relations from the point of view of a nature-provided interactional complex of realms of meaning; the reconstruction response approaches these same questions of meaning from the point of view of a human-provided interactional complex of realms of meaning. These are notably *creative responses* belonging to the relationship aspect.

Viewing EE-related discourse -- the policy dialogue -- from this organizational perspective may inform further discussion and elaboration of value and power relations of EE praxis. We allow that the map has no metanarrative value, but requires the interplay of many mininarratives to enhance the dialogue. A continual process of remapping the dialogue is called for, first, by the need to deprivilege the map itself as metanarrative, and second, to allow space for the emergence of 'new' voices within the dialogue.

Again, we present here a summation of texts (see Table 2) utilized in the remapping of EE-related discourse based on the local/global dynamic. (40) We name each text according to a perspective which it appears to articulate, then locate it based on the choices which it advocates. Once again, it is important to note that texts may be located within the same domains of response based on their respective truth and value choices, without necessarily agreeing on desired outcomes of policy. The map is meant to inform our understanding of the internal relations of this discourse, and to provide a coherent sense of the contours and juxtapositions within the intertextual field itself.

Seventeen perspectives emerge in the remapping project to re/present the fuller spectrum of EE-related discourse as reflected in the local/global dynamic. Each text operates as a voice in the policy dialogue, and the respective truth and value advocacies derived from the texts form the interrelations of the dialogue, and therefore of the map. It is expected that further remapping may occur as other dynamics command attention. It is hoped that readers will construct their own maps, and join the dialogue. In the next section, we draw conclusions about the mapping project, reflect on the

Table 2. Summation of EE-Related Texts for Figure 2

Text	Perspective	Characteristics/Advocacies
Campbell 1988	mythic breakdown	cultural collisions, transition in human awareness led to rupture in world-, nature-related meaning/need for universal social image, true planetary mythology
Beck 1992	radicalized science	restructuration of society based on distribution of risk derives from, accentuates global trends/new social structure requires radical, democratized science
Shea 1992	convivial planetary	human rights, ecology as frameworks for social change; new world culture as synthesis/nature-based restructuration of society and meaning
Robertson 1992	world-structuration	global interdependence, global consciousness as long-standing trends, accelerated by environmentalism/need for global social theory to counteract danger of trends
Castro 1993	differential development	inherent contradictions of sustainable development in hands of developed world as plunderers/need to dismantle hierarchical stranglehold on resources, free Third World to develop
Sponsel 1987	cultural ecology	planetary transformation into disequilibrium social ordering as problem/need for nature-based social reordering of society for equilibrium
Tudor 1991	sustainable development	common global ground needed to move EE forward/ need to balance economic imperatives with environmental protection at global level
Smith 1993	resacralized nature	myth of progress as problem/need to replace with myth characterizing deep relations with nature, to reenchant, resacralize with nature-based mythology
Faulconer 1993	historical	current models of EE work against creation of truly sustainable society/need for nature-based valuation
Gough 1993	fictive narrative	EE, science education as stories that frame realities of global conditions inappropriately/need for stories which foreground kinship with nature
Fuller 1988	aesthetic	erosion of concept of immanence led to despair and despondency in human spirit/need for return to *theoria*, aesthetic response to nature
Cosgrove 1988	techno-poetic collaboration	nature relations as constant reworking over time of meaning/reunion of *techne* and *poesis* needed in postmodern reconstruction of global meaning

Table 2. Summation of EE-Related Texts for Figure 2 (continued)

Text	Perspective	Characteristics/Advocacies
Slovic 1992	self-awareness through place-awareness	effects of place on sense of self, belonging; changes in attitude and behavior depend on awakening to awe/ need for submission to 'ancient influences'
Abberley 1993	reinhabitation	homogenization of cultures and regions into global as problem/nature-based evolution of culture and technology
Buttimer 1993	appropriate scales	collision of social equity, economic growth and ecological sustainability/local constructions of meaning must play role in policy formation
Bowers 1995	sustainable education	outlines cultural responses to environmental problems/ need to problematize technology and progress as iconic metaphors
Prakash 1995	postmodern ecology	anti-local, -woman, -culture, -nature character of modernist ecological expertise/relocation of choice- and decision-making in local sites, peoples

Note: for further elaboration of texts, see Nicholson-Goodman (1996), *Globalization, the New World Order & Local Imperatives: Mapping Our Way Towards a Sustainable Dialogue on Environment.* Paper presented at Comparative and International Education Society Annual Meeting, March 6-10; Williamsburg, VA.

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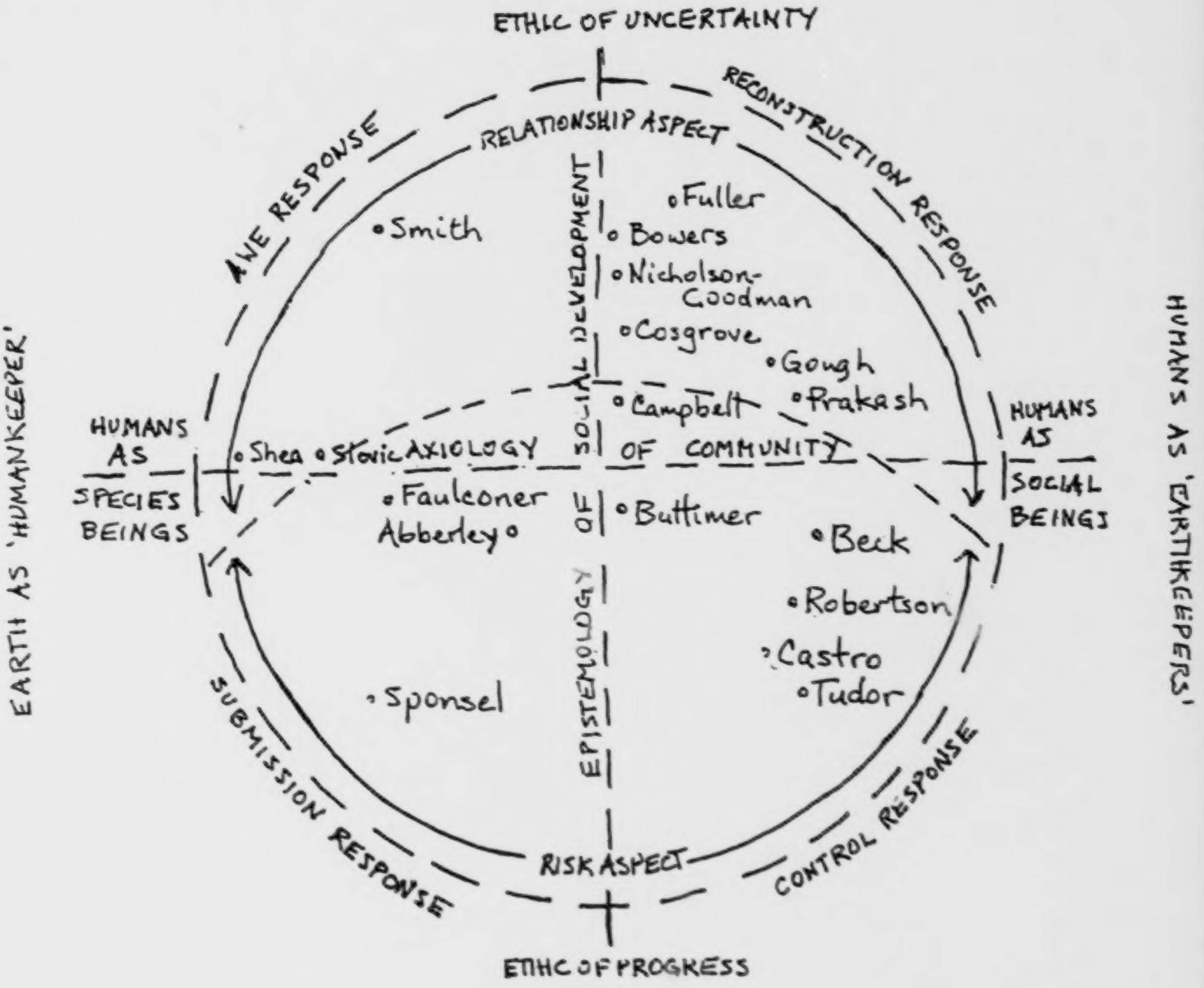

Source: Nicholson-Goodman, J. (1996), *Globalization, the New World Order & Local Imperatives: Mapping Our Way Towards a Sustainable Dialogue on Environment.* Paper presented at the Comparative & International Education Society Annual Meeting, Williamsburg, VA.

process and the problems, and address both the limitations of the study and expectations for further research.

Reflections and Conclusions

What does the postmodern turn mean in terms of making sense for ourselves and for/ with our readers as comparative educators? We have demonstrated in this study that social cartography as a postmodern process/practice is a useful means for excavating sites of knowledge, or situated ways of knowing. We believe that we have also demonstrated its capacity to engage the metanarratives of modernity alongside emerging mininarratives, revealing the truth and power relations of both within the specific discourse of EE-related texts, to make those relations explicit through the mapping and remapping of the discourse. Our goal has been to construct/reconstruct that policy dialogue, making its implications explicit by reframing a multiplicity of ways of seeing the embodied knowledge in the intertextual field in the form of a visual dialogue.

The interplay of readers' input, both in our own dialogue and in our reading (and translation) of our mapping efforts, has signalled that there are some crucial aspects of the project which require further consideration. Mapping, as pointed out by Abberley (1993) (41), is a sociopolitical activity which has often been taken out of the hands of local people and reserved for those who have authority and power to use maps to retain or enhance that power. We have no desire to utilize social cartography in such a way, and are mindful that our mapping efforts are just one way of seeing the issues and concerns involved. The invitation to remap is an earnest one, but requires active readers who are willing to involve themselves in such efforts. Otherwise the potential of the map to be construed as a model emerges, threatening the integrity of the project.

The visual imagery involved is equally problematic. We have spoken of the difficulty of mapping ideas on a flat, two-dimensional surface, and the first author has been challenged by the second to move on from a form of imagery which at least hints at quadrants and order to something new which can incorporate motion, change and multiplicity. We need to ask whether the rapid acceleration of change in current times means that the printed page may soon become obsolete. The second author raised an important and related question: namely, are we approaching a time when only three-dimensional forms of imagery (film, holograms, etc.) will satisfy our need for ordering diverse perceptions of reality? Many of our readers called for the insertion of a third dimension in this mapping project, but the first author has as yet been unable to formulate something both appropriate and readable. Some encouraged the use of computer graphics to create the third dimension, while still others rejected this notion as a compromise within the discourse field of EE itself, since the computer is a symbol for some of a mechanistic world and of the reduction of nature to technologically-produced images.

We have argued the need for the project in terms of its practicality for those engaged in environmental education, who deal continually with problems of the Other and with the metanarratives of science, technology and progress. We have shown the need for conceptual organizers which can inform this practice, offering two maps which portray ways of conceptualizing spatial interrelations in the discourse and of revealing truth and value orientations involved in the policy dialogue. While the practicality of the project may be apparent to us, only its actual usage by those engaged in such practice can provide the feedback we seek.

We have accomplished what we set out to do. We have: explained the origins of the work and rationale for social mapping and its possibilities in general; explored an area of educational policy discourse as an ongoing dialogue, and its sites of knowledge; narrated the problems and promises of the process through disclosure of its inner workings within this mapping project; presented a remapping of EE-related discourse to expose further potential; and reflected critically upon the limitations and usefulness of the project.

END NOTES

1. R. G. Paulston, "Mapping Discourse in Comparative Education Texts." *Compare*, 23(2), (1993), p. 101.

2. R. Usher and R. Edwards, *Postmodernism and Education*. (London: Routledge, 1994).

3. R. G. Paulston, ed., *Social Cartography: Mapping Ways of Seeing Social and Educational Change*. (New York: Garland, 1996), pp. xiii-xiv.

4. *Ibid.*

5. Foucault's association with Bachelard and Canguilhem dates to his student days. Bachelard taught at the Sorbonne while Foucault was a student there, and Canguilhem was Foucault's thesis advisor in his *doctorat d'etat* in the history of science. Bachelard's work is largely focused on ruptures in the history of science and changes in conceptions of reason proceeding from these ruptures. He identified (or constructed) a model of scientific change based on the division of epistemological phenomena into three categories: epistemological breaks, existing between scientific cognition and everyday experience, as well as within realms of scientific cognition; epistemological obstacles, concepts or methods preventing such breaks, usually deriving from past ways of seeing; and epistemological acts, leaps of genius that introduce the unexpected into the realm of inquiry. One conclusion which he drew was that no single, unified conception of rationality may be found, but rather that regions of rationality prevailed in the history of scientific thought. Whereas Bachelard's work was largely philosophical, Canguilhem was primarily a historian of science who conceptualized a model of history of science as a law court, where decisions rendered on concepts and their validity are based on normative criteria which prohibit a value-free orientation. For further reading, see G. Bachelard, *L'activite rationaliste de la physique contemporaine*. (Paris, 1951); and G. Canguilhem, *Etudes d'histoire et de la philosophie des sciences*. (Paris, 1970). See also G. Gutting, "Continental Philosophy and the History of Science." In *Companion to the History of Modern Science*. (London: Routledge, 1990); and M. Philp, "Michel Foucault." In *The Return of Grand Theory in the Human Sciences*, ed. Q. Skinner. (Cambridge: Cambridge University Press, 1985).

6. M. Foucault, *The Archaeology of Knowledge*, trans. A. Sheridan. (New York: Pantheon, 1972), p. 4.

7. *Ibid.*, p. 5.

8. *Ibid.*, p. 7.

9. *Ibid.*, p. 8.

10. *Ibid.*, p. 10.

11. *Ibid.*, p. 12.

12. *Ibid.*, p. 14.

13. R. G. Paulston and M. Liebman, *The Promise of a Critical Postmodern Cartography*. (Research Report No. 2). (Pittsburgh: University of Pittsburgh, Administrative & Policy Studies Conceptual Mapping Project, 1993); R. G. Paulston, "Mapping Knowledge Perspectives in Studies of Educational Change." In *Transforming Schools*, ed. P. W. Cookson and B. Schneider. (New York: Garland, 1995).

14. See G. P. Kelly, "Debates and Trends in Comparative Education." In *Emergent Issues in Education:Comparative Perspectives*, ed. R. F. Arnove, P. G. Altbach and G. P. Kelly. (Albany: State University of New York Press, 1992); R. G. Paulston, *Conflicting Theories of Social and Educational Change*. (Pittsburgh: University of Pittsburgh Center for International Studies, 1976); R. G. Paulston, "Commentary: From Paradigm Wars to Disputatious Community," *Comparative Education Review*, 34 (August 1990): 395-400.

15. V. D. Rust, "Postmodernism and Its Comparative Education Implications," *Comparative Education Review*, 35 (November 1991): 610-627; Rust in Paulston and Liebman, p. 6..

16. Paulston and Liebman, pp. 6-7.

17. *Ibid.*, p. 7.

18. T. W. Mouat, "The Timely Emergence of Social Cartography." In *Social Cartography: Mapping Ways of Seeing Social and Educational Change*. (New York: Garland, 1996).

19. E. Soja, in Paulston and Liebman, p. 12.

20. Paulston and Liebman, p. 12.

21. *Ibid.*, p. 15.

22. *Ibid.*, pp. 15-16.

23. Paulston, 1993, p. 101.

24. *Ibid.*, p. 112.

25. *Ibid.*, p. 112-113.

26. Paulston, 1996, p. xv.

27. Rust.

28. J. Nicholson-Goodman, "A Ludic Approach to Mapping Environmental Education Discourse." In *Social Cartography: Mapping Ways of Seeing Social and Educational Change*. (New York: Garland, 1996).

29. Paulston, 1995.

30. See, for example, R. Eyerman and A. Jamison, *Social Movements: A Cognitive Approach*. (University Park, Pennsylvania: The Pennsylvania State University Press, 1991); A. Melucci, *Nomads of the Present*. (Philadelphia: Temple University Press, 1989); A. Touraine, *Return of the Actor: Social Theory in Postindustrial Society*. (Minneapolis: University of Minnesota Press, 1988).

31. See B. Taylor, "Earth First! and Global Narratives of Popular Ecological Resistance." In *Ecological Resistance Movements: the Global Emergence of Radical and Popular Environmentalism*, ed. B. Taylor. (Albany: State University of New York Press, 1995); pp. 11-13.

32. Rust exhorts us to include art and aesthetics as aspects of our work in comparative education, while questioning "the role this domain should play in educational inquiry and discourse" (p. 624). In Paulston and Liebman, mapping is an aesthetic expression of the meaning of knowledge related to the mapper's understanding of some social system, and the reader of the mapping project is offered, in lieu of truth, a work of cognitive art -- "a portrait... representing the possibilities portrayed by being open to the world's mutliple cultural truths" (pp. 13-14).

33. Nicholson-Goodman, p. 308.

34. *Ibid.*

35. Paulston and Liebman, p. 14.

36. Nicholson-Goodman.

37. *Ibid.*

38. I envision what I describe in "A Ludic Approach to Mapping Environmental Education Discourse" as "walking the circle of human experience" (p. 310) in terms of a four-directional, circular approach to ways of seeing. While this envisioning of human experience has roots in my own life and understandings, it is at least partially informed by the concept of the Medicine Wheel as detailed in H. Storm, *Seven Arrows*. (New York: Ballantine, 1972). Here the Medicine Wheel is depicted as "a mirror in which everything is reflected." "Any idea, person or object can be a Medicine Wheel" for us, and wholeness depends upon migrating from one way of seeing (or direction) to the next in a continual process of realization and rediscovery (p. 4-7). As the cognitive and spiritual transitions through which I travel (and through which my understanding grows) cohere, I am faced with the dilemma of determining how best to escape the dizzying effects of relativism, and I make peace with constant change and flux by adopting an ethic of shifting identity which allows for change while resisting any claim to evolution toward a supposed higher consciousness. In this way, no prior understanding is silenced, and no later one is privileged. The four-directional schema utilized in the conceptual mapping project speaks to this conceptual understanding of shifting vision and shifting voice, and therefore appeals to me as a place of integrity from which to locate how I "see." The negotiated figure serves for me as a mirror or a Medicine Wheel of my own value and power relations, as well as interrelations within the intertextual field of EE-related discourse.

39. Nicholson-Goodman.

40. J. Nicholson-Goodman, *Globalization, the New World Order and Local Imperatives: Mapping Our Way Towards a Sustainable Dialogue on Environment.* A paper presented at the Comparative and International Education Society Annual Meeting. (Williamsburg, March 6-10, 1996).

41. D. Aberley, *Boundaries of Home.* (Gabriola Island, BC: New Society Publishers, 1993. Aberley articulates the view that maps "are models of the world – icons... for what our senses "see" through the filters of environment, culture, and experience" (p. 1), and argues that mapping is a way of reempowering ourselves in relation to the places and situated experiences of our lives.

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POSTMODERNITY'S INFLUENCE IN COMPARATIVE EDUCATION THEORY AND DEBATE

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ABSTRACT

The monolithic society embodied in metanarratives is splintered into associations of persons and cultures addressing localized needs and visions for their futures. This splintering resulted in new ways of seeing the world. ways quite different from those of a world of only a few decades ago. As a result. people now realize their potential and place in the world quite differently from that of their ancestors of only one or two generations ago.

How comparative educators respond to this questioning of social structure and assist students who desire to resolve personal questions of self in a world offering a multiplicity of truths and values may over time determine how the society will function as an economic whole while viewing itself as cultural components. Social maps are offered as a new comparative method of illustrating a vigorous social milieu composed of a profusion of narratives, as a reserach tool for our time.

POSTMODERNITY'S INFLUENCE IN COMPARATIVE EDUCATION THEORY AND DEBATE

> Postmodernism breaks with modernism in that the latter is a process of cultural differentiation producing clearly defined boundaries of practice and meaning while postmodernism is a process of `de-differentiation' where boundaries break down. Consequently, different cultural spheres loose their autonomy as the aesthetic realm begins to colonize both theoretical and moral-political spheres.
>
> (Lash 1990, 11)

> Postmodernity is marked by a view of the human world as irreducibly and irrevocably pluralistic split into a multitude of sovereign units and sites of authority, with no horizontal or vertical order, either in actuality or in potency.
>
> (Bauman 1992, 35)

How has comparative education theory changed in the shift from modernity to postmodernity? How are examples of acceptance for the transition evident in education research literature? How are mininarratives addressed in postmodern education texts?

Modernist comparative education treated education as a science as evidenced by the references to procedure and outcome in three quotes specific to different knowledge needs.

Lyotard (1984) on modernist science:

> The positivists philosophy of efficiency is defined by an input/output ratio . . . the system must follow a regular "path" . . . so that an accurate prediction of the output can be made. (P. 54)

Robertson (1992) on modernist sociology:

> The waves of interest in sociologies of global and international structures and processes that occurred in the 1960s . . . was developed in significant part in relation to the more well-tried themes of development, industrialization, and modernization.

Doll (1990) on modernist education:

> Modern curricular emphasis has been on the nature and measurement of the product created . . . modernist have defined curriculum development and delivery as a series of techniques and mechanistic acts. (p. 512)

How mapping postmodern voices offers comparative education a method supplimenting well-tried modernist themes of output, process, and mechanistic acts will be considered on the following pages beginning with an early reaction to the displacement of modernist mechanization with postmodern ideology where it is viewed as an abberation and eccentricity of dulled intellectualism.

An Uncertain, Irresolute Transition

> There is sense here, but not safe sense. Sense made here is limited, local, provisional and always critical. Self-critical. That is sense within the postmodern moment. That is the postmodern.
>
> (Marshall 1992, 2)

In the early 1980s the impact of postmodernity had yet to reach comparative education studies with any certainty. E. Epstein (1983) wrote, rather unconvincingly in the light of current trends, that although it was acceptable that other nations or cultures should hold to and express a particular ideology and that ideology provides material for studying and understanding that culture, for comparativists working in education to abandon their rigorous, positivist methods and turn education research over to ideological posturing was unacceptable.

The postmodernity of the early 1980s alarmed Epstein (1983) as he used his presidential address to express fears that the influence of ideology threatened education's scientific method of scholarship-dedicated-to-the-discovery-of-truth. Education's scientific mission, "to scrape off the veneer of subjective judgment to achieve wisdom, insight, and understanding," if replaced by methods dedicated to subjectivity rather than objectivity, would be "contaminated by partisan belief" leading to "diminish[ed] intellectual activity" (3). Epstein's field, comparative education, "exposed to varying national orientations and incompatible world views" (3), was "particularly delicate and vulnerable to devastating cleavages" (29). Ideology was a detriment to education, "society's most enduring mechanism for inculcating belief systems" (3), a mechanism that by tradition and necessity "concentrates on the most impressionable segment of society" (29). Epstein's strongly worded concern warned of diminishing intellectual activity, that the increasing numbers and influences of ideologies fragmented the legitimizing, paradigmatic value system bequeathed by Enlightenment orthodoxy.

However, at the end of the same article Epstein anticipates a change in the conceptual development of comparative education, arguing that it is not the existence of ideology that poses a threat to comparative education, but the tendency of comparativists not to recognize ideology "as an inescapable part of whatever epistemology we subscribe to" and admitting to it in scholarship. Recognizing ideology would make scholars more "self-conscious about the bias and values that infuse" methods as well as cause scholars to be "less self-righteous about the scholarship of others with different epistemologies" (28-29). The benefits gained from the awareness of ideological bias would be manifest in their ability to "work conscientiously to understand those differences and to respect, however critical we may be of them, the fundamental assumptions and beliefs of others" (29).

Epstein's argument, it seems to me, comes half-circle. At the beginning of his article he exclaims how comparative studies should distance methodology from ideology; at the end of his article he embraces ideology-awareness as a means to glean understanding. Eleven years after Foucault (1972) struggled unsuccessfully to deal with postmodernity (by then already recognized by Toynbee (1954) as "an age characterized by the coexistence of different cultures" and by Bell (1973) as "post-industrial society"), Epstein demonstrates his difficulty with coming to terms with the scientism he seems to think should guide comparative research and how competing ideologies might influence and possibly change the rigorous methodology he advocated for comparative education studies. His article presents the perspective of a person patronizing wrong-doing in others while warning his own to beware the same evil. How is this straddling of the postmodern threshold interpreted?

Holmes (1983) considers that Epstein's confusion derives from an inability to sort through the various meanings of ideology so that a bland potpourri obscures where a sharp distinction would illuminate his meanings. Holmes reading identifies six definitions for ideology in Epstein's text:

> 1) what is omitted from what the educational theory says, or what it contains that is difficult to acknowledge;
>
> 2) the bias observers bring to their study of school-society relations;
>
> 3) the framework of political consciousness around which a group of people organize themselves for political action;

4) the root of a paradigm;

5) the range of values used to define desirable end states; and

6) biased and partisan values. (42)

Holmes criticizes Epstein's linking of the criterion of ideological assumptions with epistemological assumptions, stating that there are no such links. Paradigm shifts may result from shifts in epistemology or shifts in ideology, but an epistemological shift does not imply an ideological shift, or vice versa. Holmes argues for a definition of ideologies emphasizing a purely political heritage applied only in arguments with a foundation in political criteria.

Foster (1983) argues that there is a purely political basis to the development and maintenance of ideologies, finding "ideology is distinguished by its attempts to maintain an intellectually closed system." Foster notes that Shils observed "no great ideology has ever regarded the disciplined pursuit of truth.. .as part of its obligations" (34-35) Concerned as he was with modernist quests for truth, there is little in these definitions to assuage Epstein's anxiety.

Having dealt with the concept of ideology, Holmes turns to paradigms, defined as "the beliefs, values, theories, models, and techniques that are used by research workers to legitimize what they are doing or to give direction to their inquiries" (585). Holmes (1983) considers that theories "add up to a pattern of theoretical assumptions and models that Kuhn would . . . term a paradigm" (42). In a comprehensive interrogation of the international literature seeking to explain educational reform efforts and outcomes, Paulston (1977) found that two paradigms--the equilibrium and the conflict--functioned as the basis of all educational change theories; theories he then defined as "bodies of logically interdependent generalized concepts with empirical referents" (374).

These definitions, then, can be seen to construct a hierarchy: paradigms consist of any number of theories in turn hosting any number of ideologies. The hierarchy of ideology to theory to paradigm then is a politically active idea located in generalized concepts derived from an empirically referred value system. What Epstein seemed particularly concerned with is the notion that a shift was occurring denying the necessity of what Paulston calls "empirical referents," that ideologies would become self-legitimizing raising the prospect that positivist rigor would witness the diminishing of both theories and paradigms. In essence, quixotic self-reference would replace positivists pragmatics.

Epstein's examination of prevailing ideologies, what he called "incompatible currents," concluded that to that date only Paulston (1976) had examined the incongruities of the variety of ideologies. Epstein notes that Paulston "advances a paradigmatic model of the field's development" (28), that he assumed the most burdensome task of seeking "to delineate the total range of theoretical perspectives that have been used to support educational reform strategies and to suggest how individual choice behavior follows from basic philosophical, ideological, and experimental orientations to perceived social reality" (371). Paulston acknowledged that his predisposition was "to view ideology, power, and perceived group self-interest as key factors influencing planning and implementation of basic educational reforms" (371), adding that "the notion of achieving synthesis by drawing selectively from different paradigms having competing ideological roots is dubious" (5), a conclusion predating the Habermas-consensus versus Lyotard-paralogy debates.

Postmodernity, it now see certain, does not seek synthesis. Indeed, a decade-and-a-half after Paulston considered "the notion of achieving synthesis . . . dubious," he affirms that prediction by introducing to comparative studies (1994) his map (see Figure 1, below) affirming the increasing incidence of postmodern mininarratives influencing the disparate directions evident in contemporary, ideology-grounded education studies, a map that Epstein in the first part of his article might suggest evidences how education is now "contaminated by partisan belief," although his ensuing argument that that contamination results in "diminish[ed] intellectual activity" (3) deteriorates for lack of support. The remainder of this study presents examples of changes Epstein feared yet accepted without espousing, changes exemplifying comparative education's hesitant crossing of the postmodern Rubicon.

As evidenced by the Figure 1, comparative education's struggle with postmodernity is wanting of consensus. The field exhibits an operative paralogy no doubt acquiring Lyotard's elation. Indeed, education's discussion of postmodernity created what Lyotard (1984) advanced in *The Postmodern Condition*, a textual favoring of a plethora of mininarratives. Not all postmodern education visions, however, favor Lyotard.

Charity among Adversaries: Where Postmodernity Assimilates Modernity

> Human progress through the progress of scientific knowledge is one of those `metanarratives' or `grand narratives' . . . that are marked out as subject to incredulity in postmodernity. Indeed, that which characterizes modernity is precisely the concealing of the partiality and rootedness of knowledge claims in the cloak of universality and value neutrality. Thus, in postmodernity there is a rejection of universal and transcendental foundations of knowledge and thought, and a heightened awareness of the significance of language, discourse and socio-cultural locatedness in the making of any knowledge-claim.
>
> (Usher and Edwards 1994, 10)

Writing in terms indicating that the comparative education community's preoccupation with modernity and scientism must immediately end and come to terms with postmodernity, Rust (1991), in his presidential address, strides over the postmodern frontier, introducing the 1990s to the argument that postmodernity "should be a central concept in our comparative education discourse" (610). Calling for the application of postmodernist theories to strengthen emerging representations of reality, Rust uncritically cites the texts of Foucault, Lyotard, and Rorty, noting that Foucault thinks there is a need to move beyond determinism and universals while Lyotard discerns in the postmodern a distrust of modernist metanarratives. Rorty, according to Rust, defines the metanarrative as "the theoretical crust of convention that we all carry and tend to universalize" (616). This crust is the modernist shell postmodernists break "to open the world to the mind and soul"(616). Similarly, crust is the localized 'truth' Caputo (1992) finds evident in ancestral and communal narratives. In Rust's view, forged around heterogeneous groups of persons, the crust is a "theoretical terrorism that den[ies] contingency, values, struggle, and human agency" (Giroux 1988, quoted in Rust, 616). Rorty (1990) sees nothing new in this idea, writing that "the project of postmodernism is just a new name for the old idea of breaking the crust of convention and thereby helping the weak against the strong" (44).

Rust explains that postmodernity seems to have "gelled into two major orientations" (611). The first is a new era, well-defined and explicated, different "from the modern age, possessing new formal features in culture, a new type of social life, and a new economic order" (611), in other words, a rupture. The representative texts on postmodernity by Jameson (1984 and 1991) and Lyotard (1984 and 1988) define this direction. The second orientation explains and interprets "events in competition with other theoretical orientations that abound in the modern world" (611); that is, postmodernity is a branching of modernity. This course is the one charted by Foucault (1971 and 1972) and Rorty (1984 and 1989).

Rust, however, follows another ideological direction, one moving toward "a tempered acceptance of the notion of an era shift" (611) with the awareness that the existing pluralism consists of coincident ideological orientations emerging from an awareness of an uncertain eroding of modernity's universalism. The difference here is that Jameson and Lyotard consider a complete rupture with modernity resulted in a number of diverse, heterogenous orientations totally independent of modernity and secure in their self-legitimation. On the other hand, Rust sees these same orientations struggling to understand the degree of their newly acquired narrative freedom while recognizing that freedom, in this sense, as it is most often, is neither complete nor radical.

Postmodern discussions and criticisms are self-referenced insights into the history of modernist society and culture as it justified a world view obsessed with focusing on time and history (Soja 1985), two measures of the modernist world not always viewed as separate cognitive structures, but links holding each at least parallel to the other if not often viewed as the same entity such as exampled in Hull's (1988) linear representation of world history. Hull's chart of world history is a good example of what Giroux (1988a) calls the "continual and progressive unfolding of history" (5), the view of how time dominated modernity. In its effort to change this conceptual favoring of time and history, postmodernity's liberating influences transcend not only combined time and history, but combined space and geography as well (Giroux 1988b). To distinguish between time/space and history/geography at this point is necessary to understand how it is that Rust entreats comparative educators to relocate into postmodern space while extracting from modernity the metanarratives he desires to dismantle in a way that will disclose the multiple, small narratives previously hidden In the invisible space of the modernist "totalitarian nature of metanarratives" (614).

From Rust's perspective the clarification of metanarratives and not their rejection is the real challenge comparativists face in the postmodern era as they travel postmodern social space. This concern, also expressed by Schriewer (1988, 29) and others, is that if educators reject all metanarratives the paradigm shift would trap "us into localized frameworks that have no general validity, that disallow comparison, and that deny integration, of cultures and harmonizing values" (616). To some extent this argument is analogous to Epstein's (1983) noted above, that the modernist tendency "to scrape off the veneer of subjective judgment to achieve wisdom, insight, and understanding," if replaced by methods dedicated to subjectivity rather than objectivity, would be "contaminated by partisan belief" leading to "diminish[ed] intellectual activity" (3). At the same time, Rust sees that rejecting metanarratives is a trap that would yield no validity, disallow comparison, and deny integration, a view echoing exactly what Paulston (1977) wrote fourteen years earlier: "the notion of achieving synthesis by drawing selectively from different paradigms having competing ideological roots is dubious" (5). Rust recognizes a need for the retention and study of metanarratives while at the same time encourages the disclosure and development of the multiple small narratives previously hidden in the invisible space of the modernist society. Rust's theory, then, does not conform to Lyotard's definition of postmodernity as an incredulity toward metanarratives, as a justification for inter-cultural paralogy, but joins Rorty who argues that metanarratives are "the theoretical crust of convention that we all carry and tend to universalize" (616). However, neither does Rust join Habermas in arguing for consensus. His argument is for an open and eclectic perspective.

This is a goal that in part drives the social mapping project, but not the entire project, not all the possibilities for social mapping. For example, Figure 1 relies heavily on metanarrative for its structure and categorization of mininarratives.

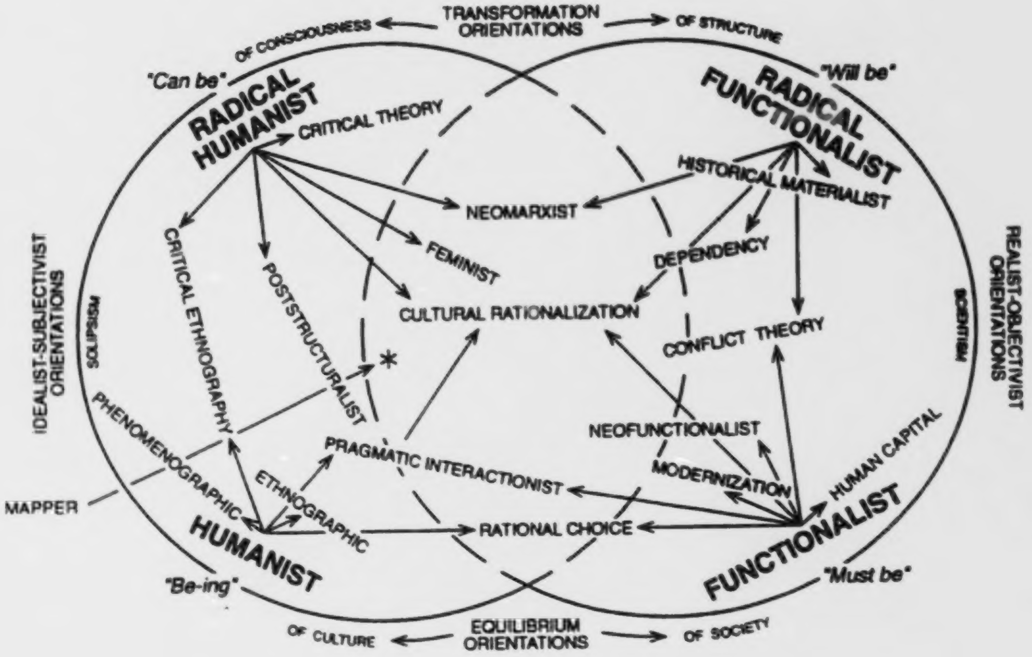

Figure 1. Paulston's Map.

Within the crust or shell of the world that he perceives, Paulston recognizes the space of those mininarratives he identifies through his study of some 60 educational reform texts. Without the "crust of convention" evident in the categories and locations of the cited mininarratives, Paulston's map would not be indicative of his open and eclectic world view. On the other hand, Julie Graham's (1992) map in Figure 2, runs counter to Rorty's contention that we maintain the theoretical crust of convention. In this example, Graham does not rely on pre-existing universals, the formality of rigorous exegesis, or what is most important in Paulston's map,

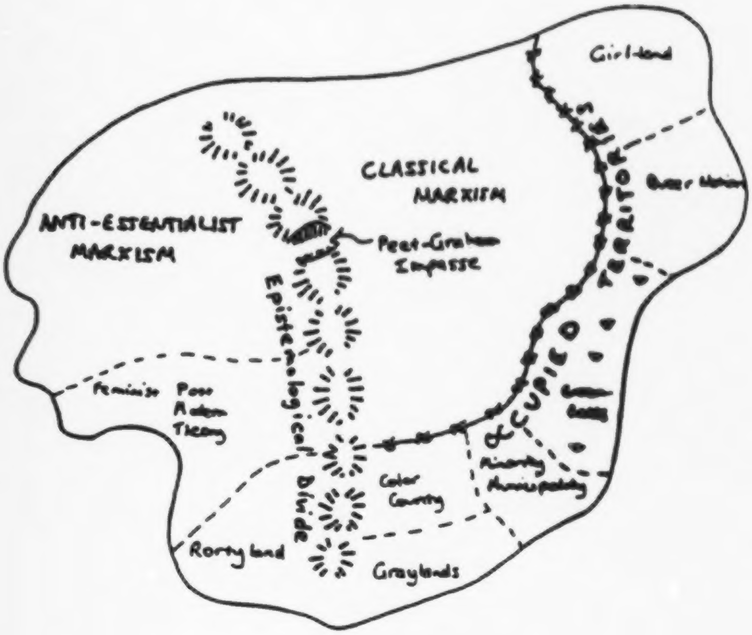

Figure 2. Graham's Map.

the spatial capacity to include additional texts. Rather than creating a world spatially welcoming all ideas, Graham creates a bounded island of ideologically filled space, where no others can readily find their place within the confines of its shores without displacing or dislodging through the use of terroristic advances. Whether one mapping is preferable or more conspicuously postmodern is not the question. Both serve an important purpose relative to the intent of their creators; both are social maps provoking thought; both are open to study and debate. The point here is that Paulston's map is Rortyian and includes, indeed relies on "the crust of convention." Graham's map is Lyotardian, rejecting all metanarratives. Based on the evidence of Rust's thesis presented above, and his subsequent mapping efforts (1996), Rust is more closely attuned to the map created by Paulston.

Rorty's concerns for the crust of convention, the maintenance of metanarratives as they serve research and presentation needs, raises the question of how or whether this concern for maintaining these requisite metanarratives stands in contrast to Lyotard's definition of postmodernity as an incredulity toward metanarratives. Rust provides one solution to the problem of maintaining metanarratives, stating "legitimate metanarratives ought to open the world to individuals and societies, providing forms of analysis that express and articulate differences and that encourage critical thinking without closing off thought and avenues for constructive action" (616) , a point already made as it applies to Paulston's map. Rust sees the task of comparativists' work in the wake of modernity's rupture is to appropriate approaches to dealing with "specific interests and needs rather than argu[ing] some universal application and validity, which ends up totalizing and confining in its ultimate effect" (616). This is a total rejection of the Epsteinian caveat.

One such universal application of questionable validity in the postmodern era is the mass-oriented society and its concurrent concept of majority rule that Rust views as obsolete because it "blunt[s] variety, openness, and diversity" (618). Majority rule and the "hegemonic norms of bourgeois societies" must give way to multiple rule in order "to create a field of stylistic and taste heterogeneity that defies overarching norms, universal standards, or national laws" (617). Concepts of multiple rule and heterogeneity arise from an unachieved project of consensus leading to "a discovery that differences matter and that distinctions can and ought to be fought over," (618) an idea arising in the wake of a sensing or awareness that a direct democracy that will connect persons "with life's events and decisions" (619) is possible. This awareness does not guarantee participation, nor does it guarantee "that the Others are able to assert themselves, to participate as full and equal partners in any discussion" (619).

However, while Rust advances postmodernist theory and the argument that postmodernity "should be a central concept in our comparative education discourse" (610) as a way to strengthen emerging representations of reality, his style of presentation falls considerably short of "allow[ing] for a system based on multiple, rather than majority rule" (618). Rust's text, as he advocates a postmodern turn, exhibits the orthodoxy of modernist rule-making.

As my text suggests, it is difficult to break the modernist mold, to struggle with language and thought that modernist dogma constrained over a long period of time (Vattimo 1992). For Rust the challenge of postmodernist writing is to overcome his considerable use of the "must" imperative, a devise reminiscent of "the totalitarian nature of metanarratives" (Rust, 614) Rust admonishes readers with the imperative throughout the article, writing that the theoretical crust of convention "must be broken" (616), or that "we must include" (619), we "must not only hear... [we] must begin to listen" (619), "we must become" (620) , "we must contribute" (621) , "we must explore" (622), and we "must see" (624). These "must" imperatives reach their climax with the following string:

> We comparative educators must discuss and explore the opportunities of the incipient age. We must define more clearly the metanarratives that have driven our field, then we must engage in the critical task of disassembling these narratives because they define what comparativists find acceptable, desirable, and efficient in education. At the same time, we must increase our attention to small narratives . . . we must also understand . . . liberating potential . . . we must learn to balance high and popular culture (625-626).

Thus while Rust advocates a concern for "critical self-awareness" his textual construction attempts to instill in the reader his own metanarrative: 'Rust-awareness.' It is difficult to work and think In the postmodern, to completely associate one's thinking from modernist universal perceptions. This is one problem inherent in the discourse of those making the dash to inclusion in the ranks of the postmodern, although it is probably a greater problem for those who identify with the Rorty/Rust/Paulston open and eclectic perspective.

A period of eight years separated Epstein's cautious brush with ideology and Rust's headlong launch into postmodern space and the universe of ideologic constellations. Doubtless, considerable changes occurred in that time to create two such disparate entreaties to persons working In comparative education. It is not to a history of those changes that I now turn, but to a geography of those changes.

Dazed and Confused Terms of Endearment

Different views of what is important to education fill volumes of the field's discourse. The following perspectives of postmodern education or education for postmodernity represent a few of those views. They are enlightening for their variety and distinction from modernity and from each other as well as occasionally for their apparent inadequacy in coming to terms with their own space, as is evident in the first two views.

The need for a Cultural Cartography

> Critical pedagogy . . . continues the modern project of emancipation through the adoption of certain postmodern ideas. Feminist pedagogy [in contrast] aims to lay open the ambiguous and contradictory processes of emancipation and oppression by the deployment of poststructuralist analysis.
>
> (Usher and Edwards 1994, 221)

Noting that comparative education's common core "has to do with the dynamics of cultural transactions and interaction" (7), Welch (1993) makes an argument for developing new investigative methods that recognize the reciprocal relationships that emerging cultures can realize, noting new methods are needed because the "major research traditions which have been employed in comparative education, are often fundamentally deficient in the ways they conceive . . . culture, and that therefore much of the reality of other cultures is lost, or misconceived" (7). From his outset Welch disagrees with Epstein's argument of a decade earlier, but also rejects Rust's desire to maintain some of the theory and method of positivist education research.

Welch states his concern is to develop "more reciprocal, less coercive" (7) research methods. He concludes that Gadamer's (1986) thesis offers such a method. I will review these arguments momentarily. The cultural milieu we recognize and devote our attention to has expanded, not only in terms of the change effecting persons living within a given milieu but in the perception of the multiplicity of cultural values and forms. The result of this cultural expansion and perceptive change is that Welch can now identify two dominant cultural/educational perspectives. The first as "an integrative force in society" (7) because it represented the cultural form all persons in a society supposedly aspired to achieve. While he does not name this cultural form other than saying that it is an integrative force, we can consider it the 'culture-of-commodity' because it offers individuals an opportunity to acquire quantities of the cultural capital that others define and validate as offering the greatest potential for social success in a society with "a venerable and largely fixed tradition" (7). In other words, persons can buy into the culture-of-commodity by accepting its tenets and working to attain its standards. He identifies these cultural traditions as those assigning performance conditions to preferred intellectual objectives and content. Elite education institutions reflect these traditions.

Until recently this cultural form was the dominate "ideal-type advanced [in] Western economy and society" (18). From this platform "modernization theorists were unrelenting in their desire to impose the structural attributes of an ideal-typical modern society upon less developed nations" (18). This is the coercive cultural form Welch identifies when he calls for "new forms of investigation which are based on more reciprocal, less coercive, cultural relations" (7).

The other cultural form Welch discusses is "more reciprocal, less coercive." It derives from the perspective that culture is "an arena of social contest, largely unequal, in which the dominant group gains, or retains, control over a cultural definition which is thus seen as more legitimate, and of higher status - and which is subsequently confirmed in schools". (8). This cultural form that Welch calls the "selective tradition" removes itself from the monolithic integrative aspiration culture, substituting a space of cultural contests where many self-identified ideologies seek recognition, although apparently not all receive recognition. The introduction although not necessarily the advancement of contemporary Western cultural mininarratives and third world literary, political and economic independencies is consistent with this perspective of culture as 'selective tradition.' it is this perspective that opens the field to distinctive new methods identifying competing cultural claims and explaining how these claims differ from and challenge or compliment one another. At this point it is evident that Welch's proffered "more reciprocal, less coercive" research method promises to be such a method.

Welch notes that contemporary hermeneutic study focuses on understanding rather than knowledge, rejecting "the traditional (Cartesian) stress on dualisms, " the dichotomy of the subject and the object by which traditional positivist and historicist methodologies manipulated and controlled the object of studies. Understanding occurs presumably when controls and manipulations are not methodologically enforced on the object. As noted earlier, Welch expresses a concern for developing new methods facilitating comparative education's research focus, noting that he has identified a less coercive and more reciprocal relationship in Gadamer's text. Gadamer also offers two other research relationships, neither as reciprocal as the last.

In the first of these research relationship the researcher "rigorously sets out to rid oneself of any presuppositions with regard to the other, in order to discover its essence" (20). The researcher is self-distanced and objective just as a scientist objectifies phenomena. This methodology "leaves no room for the expression of the other culture in its own terms... .This is the realm of pure theory . . . in which morality plays no role" (20). This is positivist science methodology, allowing no input from the research object and, thus, rejecting any possibility of intersubjective knowing.

The second research relationship also positions the researcher preferentially to the research object; but here, according to Welch, the researcher allows the research object to have some input. But, as in critical theory, the research object does not speak for itself. The researcher claims greater knowledge and truer consciousness, and therefore seeks to control the research object's own consciousness and knowledge. This research methodology "does not provide a base for mutual reciprocal relations between cultures" (Welch, 22).

The third research relationship is interactive, "there are no privileged epistemological or cultural positions, there are just forms-of-life, or language games, in Wittgenstein's sense" (21). The researcher's cultural background cannot be taken for granted, but is viewed in the other culture's terms. This is "an open dialogue in which each protagonist accepts that their understanding of the other as well of themselves is substantially changeable" (22).

A rigorous Rortyian mapping, such as Paulston's map in Figure 1, is interactive as proposed in this last research model. Paulston's map represents forms of life; his textual exegesis essentially is a language game; the map offers itself for open dialogue. Maps based on the first two models are also possible, although the examples given below might seem both convenient and flaccid.

The maps created in Eaton's study (Gould and White 1986) of how military officers view the relative power of different countries seem to belong to the first research relationship. The impressions or ideas of the participant military officers are self-distanced and objective if we accord a certain privilege to their professionalism and knowledge of both allies and enemies. Certainly there is no input from military officers from the mapped countries directly influencing the immediate maps generated by Eaton's study; that is, there was no instance of corroboration between officers. To quote Welch again: there is "no room for the expression of the other culture in its own terms. . . . This is the realm of pure theory," as well as the realm of Eaton's study.

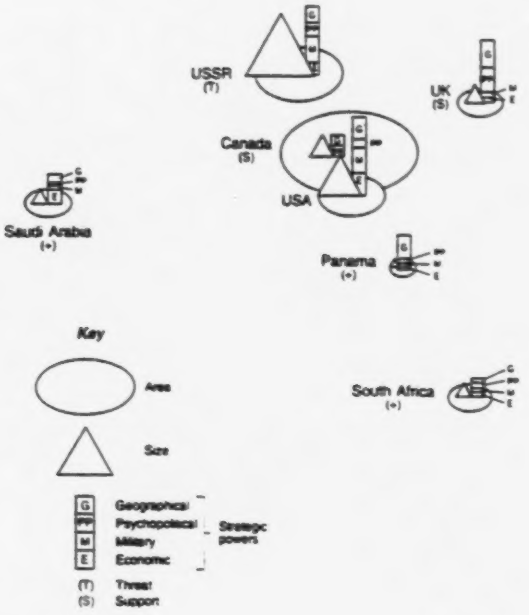

Figure 3. Eaton's Map

The second research relationship might be seen as that driving Graham's map, where the mapper's methodology "does not provide a base for mutual reciprocal relations between cultures." Graham's “anti-essentialist" yet Marxist map in Figure 2 is preferential; it allots rather than allows space. Her map, too, did not and possibly will not permit outside input. The juxtapositioning of territories on Graham's map results not from the various represented cultures speaking for themselves, that is in determining their location such as next to whom and distanced from whom. In this example Graham's is both the greater knowledge and the truer conscious.

Although it is possible to state a brief case for mapping in all three research relationships, Welch seems unable to complete his own argument; that is, while he advocates an interactive cultural relations study model he does not propose a workable or working model meeting the criteria he advances. For example, his conclusion notes: "The implications for a meaningful and relevant comparative education are that decisions and analysis should be based on genuine attempts at developing mutual understanding" (22). While the reader awaits what seems to be a promised forthcoming revelation, an example, or at least a proposal for a new comparative methodology to provide such understanding, he merely offers an observation: "throughout comparative education, forms of genuine partnership are being called for which can herald a new intellectual and practical style, so that understanding based on mutuality is given more scope, and the indissoluble individuality of the other is recognized" (22-23). While at the beginning of his argument Welch informs us newer forms of investigation which are based on more reciprocal, less coercive, cultural relations, are advanced as one means to develop new forms of comparative research" (7), in the end he advances nothing more than the refrain that the comparative education field is calling for new methodologies. Although he sees these methodologies as forms of partnership as advanced In Gadamer's third research relationship where "there are no privileged epistemological or cultural positions," Welch leaves the reader with no practical application theories.

Notwithstanding this weakness, Welch provides the mapping project with verification of its sensitivity and flexibility. As shown above, the research relationships he gleans from Gadamer not only offer a variety of perspectives for the creation of social maps, but confirm the postmodern visions of Rorty and Rust that the crust of convention associated with modernist metanarratives, as found in the first and second research relationships, are sometimes a necessary mapping element.

As the reader may observe, opinions appear more evident in postmodern advocacy texts than solutions. Although the following provides additional insights concerning the multiplicity of postmodern education theory, even the cited authors profess their loss at locating a practical benefit derived from postmodern arguments.

Postmodernity and Negative Realities

> To subvert foundations is not to court irrationality but to foreground dialogue, practical engagement and a certain kind of self-referentiality. In the postmodern, the claim is not that there are no norms but that they are not to be found in foundations. They have to be struggled over, and in this struggle, everyone must assume a personal responsibility.
>
> (Usher and Edwards 1994, 27)

As did Rosenau, Burbules and Rice (1991) distinguish two polar postmodern regions: *postmodernism* and *antimodernism*. This distinction is often difficult to trace through some postmodern texts, however, as "these are not . . . discrete or self-contained schools of thought" and elements of both "coexist in numerous authors" (397) . They locate advocates of postmodernism in texts pursuing education options prioritized around a reconsideration of such modernist tenets as democracy and self-determination, although pedagogy in this postmodern instance would not instruct or inference ideas of progress or the rational rule of law. The critical modernist texts of Giroux (1988a, 1988b) and McLaren (1988), who "frequently invoke modernist categories, such as reason or equality" while seeking "to reappropriate, redefine, and reground them" (397), exemplify this view according to Burbules and Rice.

Antimodernism, on the other hand, "is characterized by a strong antipathy to the language, issues, and values of modernism, and seem to formulate an entirely different problematic" (398); they note, however, that its antipathy prevents antimodernism from formulating a lucid understanding of freedom, a factor constraining its ability to settle into an education theory, as exemplified by a recent study by Paulston and Liebman (1994).

Antagonistics emphasizes the subjective nature of societies; antimodernity strives to reveal how social theory prejudices societies. The deconstruction of modernity's universals creates a field where incommensurability no longer is "an unfortunate failure to establish common meanings and values, but [is] a desired state" (394); that is, paralogy rather than paradigm preoccupies social performance and all knowledge claims become problematic (Ellsworth 1989).

Antimodernist reject the dogmatic texts of Bowles and Gintis (1977) for example, who limit their educational concerns to "struggles over work, resources, and political access"

(395). While rejecting some texts, however, there is an advantage evident in antimodern discourse: it increases efforts "to broaden the terrain of struggle" (395) "by stressing the ideological, cultural, and discursive elements that fail to illuminate" (395).

Burbules and Rice also view Marxist texts as particularly obscure and lackluster challenges to postmodern narratives. They quote as an example Lugones and Spelman (1983) who contend that the modernist Left contributed to the invisibility of these groups: "We and you do not talk the same language. . . . We cannot talk to you in our language because you do not understand us" (Lugones and Spelman quoted in Burbules and Rice, 396). The criticism of Marxism is its dominating perspective, theory and language that distort the narratives of not only contemporary feminists, but of women prior to the revealing of the feminist narrative. Securing postmodern space to feminist voices indeed denies that particular space to modernist models such as positivism, Marxism and Critical Theory, but even that particular space is seen as grounds for negative discourse because of what Burbules and Rice offer is an already developed "postmodern tradition . . . avoid[ing] committing itself to a political/moral metanarrative of Its own" (397). They seem to think the failure of postmodernity is already evident in its inability or unwillingness to disclose and reject "the shortcomings of other views without positing clear alternatives to them" (397).

This point-of-view illustrates a definite antimodern inclination, suggesting a reason for better framing their argument in terms of antimodernity rather than postmodernity, according to the definitions of both positions. The failure of their argument is the same made by Welch. It is difficult to find In Burbules and Rice text any opportunity for postmodernity on under the rubric of postmodernism for those who do our research and teaching in the name of emancipation" (7). Viewing postmodernity as 'a self-consciously transitional moment" (8), Lather finds examples of writing in this era are 'dismissed as the latest example of theroticism, the divorce of theory and practice." It is a style desirous of interpreting "academic norms . . . inside of another logic . . . that displaces expectations of linearity, clear authorial voice, and closure" (8). Lather identifies her own writing as "an effort to be multi-voiced, to weave varied speaking voices together as opposed to putting forth a singular authorative voice" (9), although, in the Rortyian sense of preserving some of the crust of the metanarrative, it "does not break with a profusion of references and footnotes in its creation of textual authority" (10). Lather's interpretation of postmodern writing identifies closely with the purpose of mapping, that is, postmodern writing, like mapping "is to simultaneously use and call into question a discourse, to both challenge and inscribe dominant meaning systems in ways that construct our own categories and frameworks as contingent, positioned, partial" (10). The struggle to create a new discourse style calls on the author to "interrupt hegemonic relations and received notions of what our work is to be and to do" (10).

For Lather, then, postmodernity focuses on how language structures thought and action. Postmodern language is a "productive, constitutive force as opposed to views of language as reflective, representative of some reality capturable through conceptual adequation" (11-12). The questions she raises through this observation directly influence the rational for social mapping (Lather, 1996).

to provide education with something more than a field of negative, reactionary narratives. Indeed, they submit that such is the case, offering that this negativity is evident in texts from critical theorists Giroux and McLaren: "we also see reflected in their work the difficulty postmodernism encounters in providing principled arguments to support positive positions" (398). What arguments do they find prevalent in postmodern texts? "We often find a highly charged rhetorical style that *asserts* the primacy of certain values or *condemns* their suppression without articulating why anyone not already sympathetic with their position ought to be so" (398).

Burbules and Rice's observation that postmodernity is a field of negatively grounded narratives which are "much clearer in specifying what [they] are against than what [they] are for and why" (397) does not jeopardize the social mapping project since that project is not predicated on a desire to eliminate negativity, but is offered as a method for detailing cultural juxtapositions without being concerned whether the cultural clusters appearing on the map are similarly engaged in practices promoting understanding or acceptance (Paulston 1994).

The analyses of the previous two articles exhibit an express antipathy at the author's failure to conclude with practical solutions to the numerous calls for a postmodern pedagogy. The final two articles cited in this paper begin the journey through postmodern space with, first, a realization that in education today, "positivism retains its hegemony over practice" and, second, that the beginning of a postmodern method in comparative education is a willingness to "listen."

Postmodern Education as Multi-vocality

Lather (1989) expresses a critical eclectic interest in "the usefulness of what goes

If postmodern language is "a productive constitutive force" can social mapping fall into a category of postmodern language? Or is postmodernity opposed to mapping as a style of discourse because it is "reflective, representative of some reality capturable through conceptual adequation"? Certainly, Paulston's map appears to be a constitutive attempt to "frame as opposed to close the issue of definition" (Lather, 10), to open “a site where the play of meanings escapes the violence of logocentric closure:” (Usher and Edwards, 139).

Both Graham and Paulston's maps capture a moment of the conceptual reality, and in so doing makes both reflective in terms of Lather's argument. The answer is that as with any matter of interpretation the maps are open to debate and change. That is, as Lather instructs, everything we view in the postmodern is subject to "the plurality and agency of meaning" so that there is no constant or fixed referent. Change brings about change in perspective and interpretation, it breaks "down the fixed positionality in which discourse sustains itself" so over time - or within a given space - "the subject produces itself in relation to a new object" (12); that is, the subject sanctioned on untruth, by conceding the difference as Caputo suggests, thus creates a new truth. There is in postmodern discourse and social mapping a logic where "making sense of the conditions of our existence is much more complicated than the interplay of dominant and subordinate ideologies," so that in the end the most we can expect from postmodern discourse and social mapping, or probably their benefit and contribution to social and cultural understanding, is dependent on the "continuous cultural reinvention [or ongoing mapping and remapping] . . . tied to limitless signification shaped by contextual possibilities" (13).

Lather concludes that the "productive, constitutive force" of postmodern language continues to exacerbate "an already felt erosion of basic assumptions" (21) in educational research, although "positivism retains its hegemony over practice" (20). Education theory and education practice are at a contradictory nexus. Postmodern education theory, according to Lather, should consider "evoking ways to work with rather than be paralyzed by the loss of Cartesian stability and unity" still dominant in "the realms of pedagogy and curriculum" (20).

While Lather addresses language as postmodern vocality, (1989 and 1991) regarding language structures as they affect thought and action, Nicholson's argument considers that when someone employs language, then someone should listen.

Developing an Ear for Postmodern Pedagogy

> We need . . . educators who are committed to the task of making sure that no serious voices are left out of the great conversation that shapes our curriculum and our civilization.
>
> (Nicholson 1989, 204)

Nicholson (1989) offers another feminist perspective that is agreeable to that of a social mapper, writing that by doubting the definability of postmodernity, researchers should "attempt only to sketch some of its contours" (197) by identifying the postmodern "coexistence of different cultures" that characterize a skepticism of "autonomous spheres of knowledge and culture or separate fields of experts." This skepticism regarding whether educational theory in the postmodern is interpretable stimulates attempts "to undermine the privileged status of elitist art, the universal claims of Western science, and the objective representations of dominant groups" (198), to replace paradigm with paralogy.

Agreeing with Lyotard, Nicholson writes the "theoretical forms of postmodernism emerge from a focus on problems of the meaning, interpretation, and the legitimation of knowledge" (197), but disagrees with Lyotard when he proposes "the traditional teacher is replaceable by memory banks" (Lyotard 1984, 50). At this point Nicholson joins with Rorty's thesis "that we should conceive of education as the initiation of students into the conversations that have shaped past and present communities" (Nicholson, 204), a thesis organized around the idea that teachers should educate "students into a sense of community" (201) by fostering "a decent respect for the opinions of mankind" (200), a prospect more akin to the mapping project than Lyotard's seemingly totalitarian computerization of education and the ensuing obsolescence of the teacher.

Nicholson argues for a pedagogic practice willing to "listen to those who are telling stories about what it means to be excluded from a conversation or a community because their heros or heroines are different from those of the dominant group" (204), a pedagogy recognizing the voices of persons who modernity both neglected and made invisible (Star 1991). Thus Nicholson appropriates Lyotard's incredulity toward metanarratives, encourages Rorty's suggestions for education practice, and suffuses education practice with a commitment to hearing the compelling arguments of narrative communities.

Social Mapping: A Better Comparative Methodology?

In this review of postmodernity and education, it is evident that education remains largely dubious and sometimes cynical, conditions resulting from the fields' sweepingly discouraging inability to define and focus on a postmodern application, a concept itself dubious in the postmodern era that disparages of definition and focus as consistent with modernist ideas. The essence of the problem education encounters, however, reflects the field's concerns regarding the curricula scope and means for introducing and teaching narrative interchange in the classroom.

Comparative education studies in the postmodern era increasingly subscribe to Lyotard's rejection of positivist modernity (Paulston 1990 and 1994). Although some theorists, Rorty and Rust for example, argue for the preserving of a measure of metanarrative convention particularly with respect to some forms of research methodology, they do so while concurrently advancing with others in the field that classroom teachers might consider a method recognizing personal or local narratives. Beyond a general recognition of this point, uncertainty or disagreement flourish. How may we close with this problem of envisioning an operative teaching method in a fashion serving both teachers and students?

According to Lyotard (1984) postmodern narratives derive from the descensus of multiple narrative experiences. The postmodern narrative seeks to displace or disorient the ambiguous social boundaries that symbolize the stakes in the social game. The postmodern narratives create and maintain a condition of paralogy: the fostering of multiple perspectives, of a variety of different and dissenting prescriptive statements, each playing on the field of postmodern language games. Postmodern language games are neither permanent nor controlled, flaunting a preference for temporary social contracts, each dismissed in turn by persistent paralogical descensus.

The transient nature of postmodern narratives and the cultures these narratives represent evidences the way each cultural narrative endures in what Caupto (1992) perceives as a world of truths and untruths, a world affording and conducive to frequent perceptual shifts in the ancestral and communal narratives inherited and experienced by individuals. Further, truth sustains individually and individual truth typifies an accumulation of ideas borrowed from the field of untruths formulated outside the encompassed ancestral or communal narrative. These borrowed ideas derive from conceding the difference of multiple truths; used to situate the individual's perception of the world, these newly assimilated ideas encourage individuals to alter their thought and action in a way inconsistent with that expected by the 'truth' of the ancestral or communal narrative. Individuals perceive and assess the world in terms conditioned by their immediate world view, their assessments determining their understanding of both themselves and others. However, the synthesis of self-perception and the perception of the self proffered by others also shape the expression of the self.

It is evident that comparative education, in terms of both theory and practice, currently abides in a disquieting and directionless state. The paralogic nature of the post-modern encourages this situation. The profusion of narratives seeking recognition confuse the pedagogic core. However, locating a new core underpinning a theoretical and practical consensus would indicate the return of the metanarrative, a rigorous pattern of consensus and order throughout the system. Current patterns of descensus, however, would seem to preclude the model of system stabilization such as Epstein endorsed only a decade ago.

Epstein's cautioned arguments against ideological entanglements are both annulled or confirmed--depending on one's view of postmodernity--by Rust's advocacy of postmodern ideology as well as by Paulston's mapped confirmation that the world emerged from modernity appearing quite differently from earlier modernists models. Following Rust's counsel, comparative researchers and teachers aspire to theories and methods consistent with a variety of concepts addressing postmodernity's pedagogic influence. For some a concern for the narratives and narrative identities of ancestors and communities rather than government and nation guide individual or group aspirations.

Lather recognizes the importance of spoken language to narrative identity while Nicholson argues for a pedagogy attuned to hearing narratives. Associating the spoken word with listening skills may bring to the classroom an instructive postmodern method. The problem here, as it has long been in the classroom, is whether teachers should instruct students to concede the difference to others' ancestral or community narratives and change their world view thus differentiating themselves from their heritages, or whether teachers should instruct students to understand that differences abound without necessitating their conceding the difference. This research does not address this hypersensitive problem, however vital.

Instead, I will recommend to comparative educators and others a method relevant for instruction supportive of efforts to assist students to 'see postmodern voices.' Methodologically, social maps are relevant means to either foster understanding or to provide students with information concerning the variety of ancestral and communal truths; social maps offer options beyond personal local truth. Social maps, as elaborated in our social mapping project (Paulston 1996) speak to narrative identity in a manner consistent with the curricula and teaching choices favored by Lather. Social maps also listen for narrative identity in a manner consistent with the pedagogic choices favored by Nicholson. Social maps, then, are an agreeable blending of metaphors: social maps *see voices*, they visually evidence the recognition of narrative voices. Having one's narrative on-the-map compellingly confirms that someone hears their narrative voice.

As open-ended creative classroom projects social maps represent individual and group recognition of others, serving to affirm identities. While we may view maps as open-ended projects, they as well in some of their forms offer opportunities to incorporate disciplined study and detailed craftsmanship into the curriculum.

One irony of postmodernism as it rejects the metanarrative of positivist science is that the empirically precise study of geography and the science of cartography appear further advanced in its relocation into postmodernity than is education (Harley 1989; Soja 1989; Gregory 1994; Yaeger 1996). One reason for the relative ease of cartography's relocation to postmodernist reflection may be that the representation of the earth's specific surfaces is largely 'played-out.' The predominant and significant work that occupied cartography in centuries past now requires merely updating maps, work done more effectively and efficiently with photographic enhancements produced from space platforms. Thus Harley (1989) is able to suggest that postmodernity offers geographers and cartographers the potential to revitalize their research and craft, a challenge paralleled by Soja's (1989) concern that a postmodern geography concentrate on a critical human cartography defined and articulated by how cultures utilize space. Thus social mapping suggests the alliance of comparative education and geography to develop a new comparative cartographic methodology consistent with the visualization of narratives, an alliance combining the experience of education research and practice with the geographic procedures for studying spatial relationships and the cartographic conventions for site identification and iconification.

It is exactly this need that the social mapping project at the University of Pittsburgh has addressed since its inception in 1992 (Paulston 1996).

The monolithic society embodied in metanarratives is splintered into associations of persons and cultures addressing localized needs and visions for their futures. This splintering resulted in new ways of seeing the world, ways quite different from those of a world of only a few decades ago. As a result, people now realize their potential and place in the world quite differently from that of their ancestors of only one or two generations ago (I. Epstein 1995). How comparative educators respond to this questioning of social structure and assist students who desire to resolve personal questions of self in a world offering a multiplicity of truths and values may over time determine how the society will function as an economic whole while viewing itself as cultural components. Social maps are offered as a new comparative method of illustrating a vigorous social milieu composed of a profusion of narratives, as a reserach tool for our time.

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MAPPING VISUAL CULTURE IN COMPARATIVE EDUCATION DISCOURSE

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ABSTRACT

This effort to identify how comparative educators have chosen to visually represent our field is but a first step in this attempt to historicize our vision as we struggle with the representational dilemmas and opportunities of late modernity, and perhaps, very early postmodernity.

The paper is organized in three parts. Part one illustrates how the three scopic regimes of modernity, i.e., the technical rationalist (TR), the critical rationalist (CR) and the hermeneutical constructivist (HC) each have their own favored rhetoric and forms of representation, as well as utilities and limitations. Part two presents a personal narrative of how the social cartography project has sought to elaborate and implement a new social mapping rational and methodology. It presents, a personal narrative of one comparative educator's attempt to contribute to the liberation of the discursive field so that the task of imagining alternatives can be commenced (or perceived by researchers in a new light) in those spaces where the production of scholarly and expert knowledge for theoretical and development purposes continues to take place. This section presents general principles for a non-innocent social cartography project elaborated to remap comparative education using what might be called a scopic regime of postmodernity.

In part three, I note some possible implications of this study and the social cartography project for current theoretical debates, representational practice, and new opportunities to reposition our field vis-a-vis the human sciences in the coming millennium. Examples of how social cartography might help to construct new ways of representing and seeing are assessed. My goal here is to suggest something of the utility of heuristic social maps as new ways to both situate and open representational practice.

Mapping Visual Culture in Comparative Education Discourse

> It would be fascinating to map out the political implications of scopic regimes, but it can't be done too reductively. The perspectivalist regime is not necessarily complicitous only with oppressive political practices. Under certain circumstances it may be emancipatory; it really depends on how it is used.[1]

Introduction

In this paper, I respond to Martin Jay's imaginative proposal to "map . . . scopic regimes." While, to my knowledge, Jay has yet to undertake this ambitious task, it does make sense here in light of recent work on social cartographic methods carried out at the University of Pittsburgh since about 1992. At that time, I helped to initiate this project with a theory-mapping paper presented at the 8th World Congress of Comparative Education Societies in Prague. That study interrogated some sixty exemplary comparative education texts, and mapped the theoretical perspectives discovered onto a two dimensional field. My intent was to demonstrate how such a "social cartography," or heuristic device, might serve to identify and visualize difference within and between disputatious communities in a way that would open space for all perspectives discovered, privilege none--yet problematize all, and promote a useful visual and verbal dialogue.

This "map," included as Figure 22 below, demonstrates how postmodern figuration in the form of perceptual fields offers the eye a continuous and asymmetrical terrain of unhindered mobility, as first proposed in Merleau-Ponty's work on the phenomenology of perception. Language being more bound than mobile does not have this unhindered mobility. Lyotard has proposed that postmodern sensibility is primarily visual and breaks this colonization of the unconscious by verbal discourse. Instead, it allows a new visual aesthetics based on a paradigm of cultural de-differentiation.[2] Does this view of figural aesthetics free the image from the dictates of narrative meaning and rule-bound formalisms that have predominated under modernity's sway? How might an examination of changes in the visual culture of our field before and after the postmodern turn increase our understanding of the emergence of social mapping as a kind of cognitive art or play of figuration? Does this visual turn in representing the multiple realities of our field today result in, as claimed, a new distinct mode of visual representation where space is used to represent a spatial dispersion that offers, when *combined* with discourse analysis, a system of possibility for new knowledge?

In pursuit of some at least provisional answers, I have selected twenty-eight illustrative examples of the visual culture in comparative education discourse since the 1960's. Sources examined are the *Comparative Education Review*, *Comparative Education*, *Compare* and others. From visual analysis of these sources, four scopic regimes, or visual subcultures, are identified and presented in Figure 1. This effort to identify how comparative educators have chosen to visually represent our field is but a first step in this attempt to historicize our vision as we struggle with the representational dilemmas and opportunities of late modernity, and perhaps, very early postmodernity.

The paper is organized in three parts. Part one illustrates how the three scopic regimes of modernity, i.e., the technical rationalist (TR), the critical rationalist (CR) and the hermeneutical constructivist (HC) each have their own favored rhetoric and forms of representation, as well as utilities and limitations. Part two presents a personal narrative of how the social cartography project has sought to elaborate and implement a new social mapping rational and methodology. It presents, a personal narrative of one comparative educator's attempt to contribute to the liberation of the discursive field so that the task of imagining alternatives can be commenced (or perceived by researchers in a new light) in those spaces where the production of scholarly and expert knowledge for theoretical and development purposes continues to take place. This section presents general principles for a non-innocent social cartography project elaborated to remap comparative education using what might be called a scopic regime of postmodernity.

In part three, I note some possible implications of this study and the social cartography project for current theoretical debates, representational practice, and new opportunities to reposition our field vis-a-vis the human sciences in the coming millennium. Examples of how social cartography might help to construct new ways of representing and seeing are assessed. My goal here is to suggest something of the utility of heuristic social maps as new ways to both situate and open representational practice. But before the "picture show" begins, I will situate the mapper in this cartographic work with three quotes chosen to illustrate my present worldview and scholarly ambition:

The first is from the Australian poet Judith Wright:

> All things I focus in the crystal of my sense. I give them breath and life and set them free in the dance.[3]

The second is from the German philosopher Friedrich Nietzsche:

> There is only a perspective seeing, only a perspective `knowing,' the more affects we allow to speak about a thing, the more eyes, various eyes we are able to use for the same thing, the more complete will be our `concept' of the thing, our `objectivity.'[4]

The third is from the Mexican anthropologist Arturo Escobar:

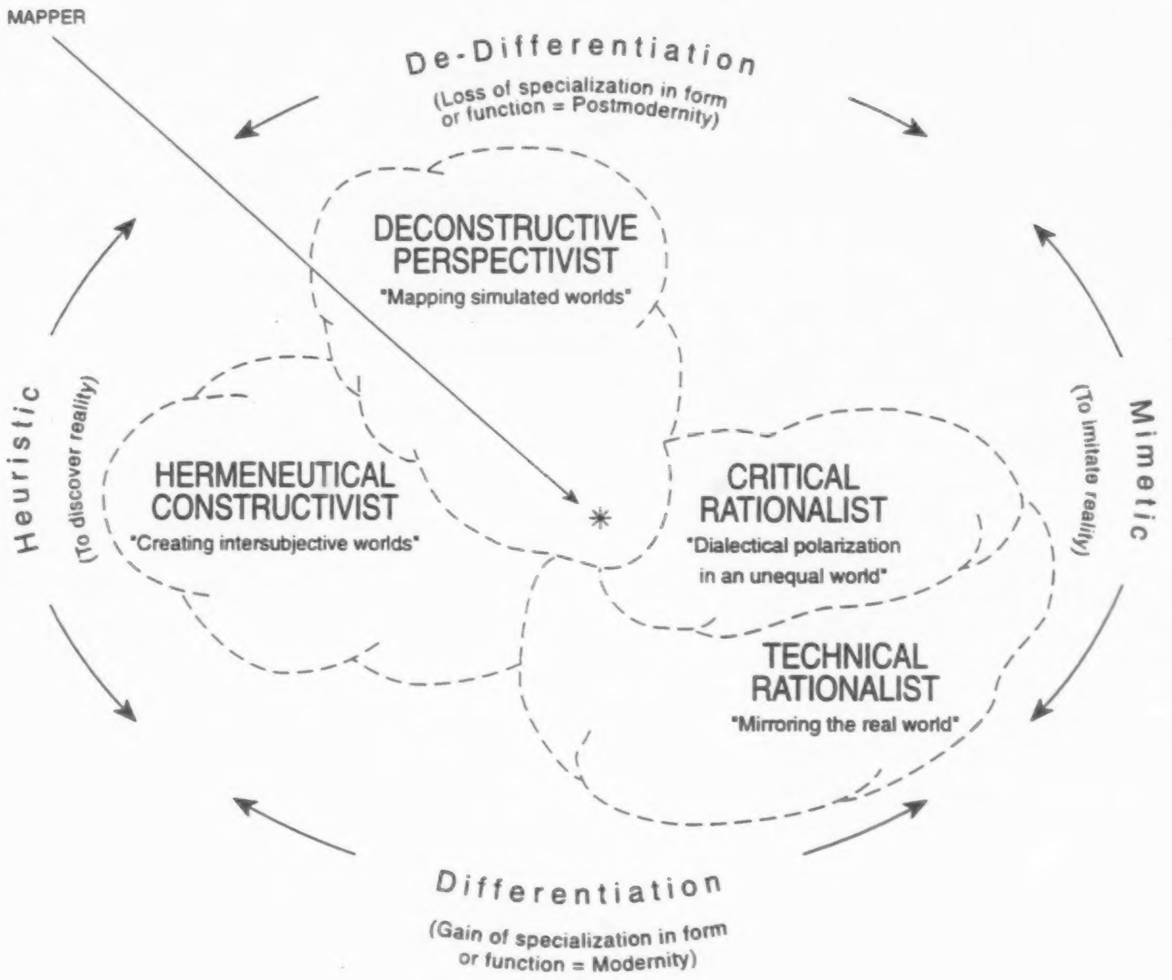

MAPPER
De-Differentiation
(Loss of specialization in form or function = Postmodernity)
DECONSTRUCTIVE PERSPECTIVIST
"Mapping simulated worlds"
Heuristic
(To discover reality)
HERMENEUTICAL CONSTRUCTIVIST
"Creating intersubjective worlds"
CRITICAL RATIONALIST
"Dialectical polarization in an unequal world"
Mimetic
(To imitate reality)
TECHNICAL RATIONALIST
"Mirroring the real world"
Differentiation
(Gain of specialization in form or function = Modernity)

Figure 1. Scopic Regimes of Modernity and Postmodernity in Comparative Education Discourse.

> Regimes of discourse and representation can be analyzed as places of encounter where identities are constructed . . . where violence is originated, symbolized, and managed. Charting regimes of representation . . . attempts to draw the `cartographies' or maps of knowledge and power . . . and of struggle.[5]

These three extracts will help me share with the reader my view on what might be called "the crisis of representation" in our field, and in the human sciences. The first quote celebrates an embodied view of knowledge construction. Wright and I align ourselves with those who oppose excessive reliance on the scientific rationality and objectivity espoused in the name of Enlightenment. We see the proper end of human learning not in a reconciliation of opposing principles, but in the play of opposites and in their interpretation. It is for us in this `play of opposites' rather than in their reconciliation that life finds its source of energy.

The quote from Nietzsche (1887) flags my concerns to elaborate a wide-visioned or perspectivist way of seeing and knowing capable of scoping difference, and a social constructivist methodology as, perhaps, most suitable for comparative research today.

In Escobar's quote, I share his concern to situate and visualize knowledge construction and representation efforts, to question and critically engage all discourse, including our own, and show the connections between power and who is allowed to speak and to represent reality. While this set of positions would seem to favor notions of embodied, situated, and polyvocal knowledge, ideas that some have identified with a postmodern sensibility, I see my point of view also coinciding with a critical pragmatic perspective that seeks to understand practice and outcomes by showing connections between choices of forms of representation and positions in the debate.

Part One   Visual Representations in Modernity

In this section, I focus on the conventions and codes that underly nonlinguistic symbol systems, what Nelson Goodman has called "languages of art." I begin to explore the gap between the seeable and the sayable, and question Mitchell's contention that the human sciences are presently undergoing a "pictorial turn" where society can be represented as *both* verbal and visual text. Mitchell claims this turn is moving us beyond

> . . . naive mimeses, copy or correspondence theories of representation: it is rather a postlinguistic, postsemiotic rediscovery of the picture as a complex interplay between visuality, apparatus, institutions, discourse, bodies, and figurality.[6]

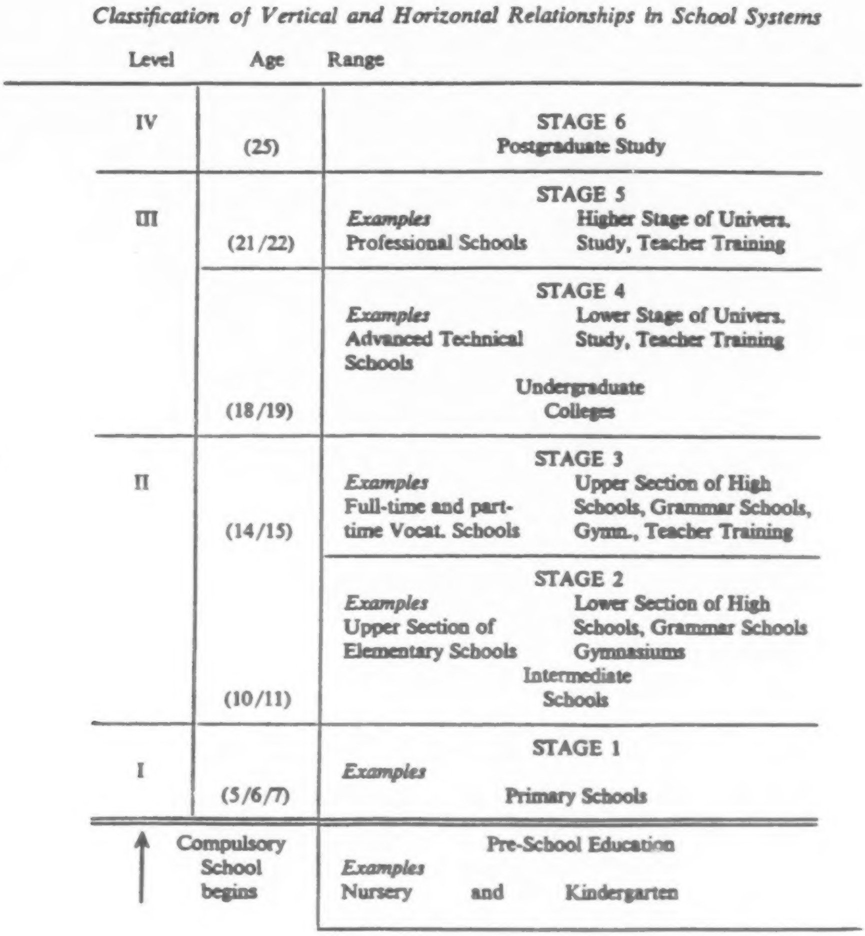
The picture now becomes a kind of model or figure for "other things (including figuration itself) . . . an unsolved problem" (p. 13). Attention to this "problem" may help make comparative educators more aware of their infatuation with scientism, positivism, and epistemology, and with their near hegemonic view of the image as a figure of representational transparency and realism.

How then may the scopic regimes of modernity and postmodernity discovered (i.e., the TR, CR, HC, and DP) be described and compared? To this end I create in Figure 1 a field of four visual cultures laid out using the axes of mimetic-heuristic and differentiation-dedifferentiation. In the lower half of the field are the three scopic regimes using modern sensibility. The upper field, in contrast, provides space for a deconstructive perspectivist (DP), or a postmodern view of representation as multiple mappings of "simulated worlds." This fourth scopic subculture is examined in Part Three.

In comparative education discourse, the technical rationalist figuration of educational reality has dominated since at least the 1960s, easily surviving some competition with critical rationalist (CR) and hermeneutical constructionist (HC) forms during the 1970s and 1980s, and with postmodern cartography after 1992.

Defining characteristics of the TR tradition can be seen in Figures 2-8 below. It most often displays a mimetic representation of reality where the observer is assumed to be independent of the phenomena observed. According to Jay, the TR view (what he calls Cartesian Perspectivism) favors a geometricalized, rationalized, essentially intellectual concept of space. It is characteristically much concerned with heirarchy, proportion, and analogical resemblances. It seeks--by presenting an abstract and quantitatively conceptualized space--to de-eroticize the visual order, to foster de-narrativization, de-textualization and de-contextualization.[7] It is gendered male. Richard Rorty sees this scopic regime attempting "to mirror nature,"[8] to insist on the literalty of realism. Without the observer "in the picture," realism presents a representation by resemblance that says how things are in a real world. Figure 2 for example, patterns spatial relationships into vertical and horizontal lines delineating levels and stages. It presents a matrix representing a reality of objective, universal and progressive systemic differentiation. Figure 3 expands this structural-functional logic to visually frame how levels of structural differentiation correlate with levels of educational "specialization in form and function." The implication is that modernity and progress closely track the importation of western educational ideas and forms. Turned on its left side, the figure presents a stair-like Parsonian progression from the traditional (Nepal) to the modern (Japan) and a graphic picture of modernization theory.

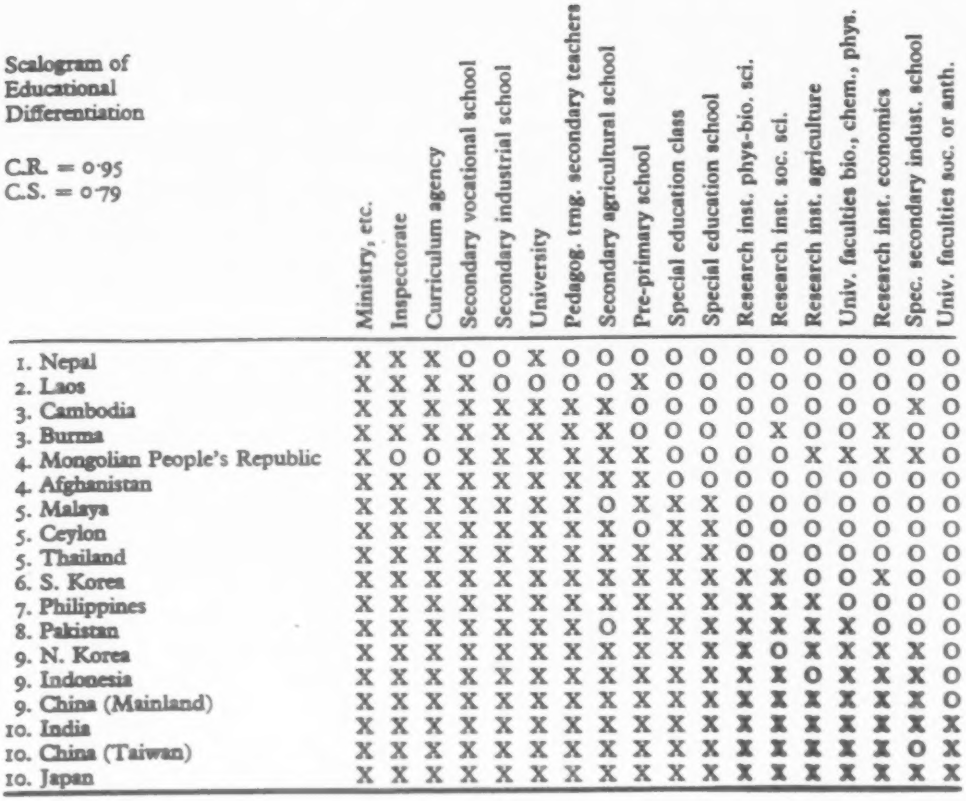
Figure 4 shifts the eye from the differentiation to the mimetic node, or pole, with a mathematical configuration of reality at the classroom, not the system level. This move to statistical modeling gained considerable impetus during the decade or so after 1974 witnessed widespread efforts to make comparative education "more scientific" and "rigorous."



Classification of Vertical and Horizontal Relationships in School Systems

Level	Age	Range
IV	(25)	STAGE 6 Postgraduate Study
III	(21/22)	STAGE 5 *Examples* Professional Schools Higher Stage of Univers. Study, Teacher Training
	(18/19)	STAGE 4 *Examples* Advanced Technical Schools Lower Stage of Univers. Study, Teacher Training Undergraduate Colleges
II	(14/15)	STAGE 3 *Examples* Full-time and part-time Vocat. Schools Upper Section of High Schools, Grammar Schools, Gymn., Teacher Training
	(10/11)	STAGE 2 *Examples* Upper Section of Elementary Schools Lower Section of High Schools, Grammar Schools Gymnasiums Intermediate Schools
I	(5/6/7)	STAGE 1 *Examples* Primary Schools
↑ Compulsory School begins		Pre-School Education *Examples* Nursery and Kindergarten

Figure 2. Classification of Vertical and Horizontal Relationships in School Systems. F. Hilker in B. Holmes and S. B. Robinsohn, *Relevant Data in Comparative Education* (Geneva: IBE, 1963), p. 57.



Scalogram of
Educational
Differentiation

C.R. = 0·95
C.S. = 0·79

	Ministry, etc.	Inspectorate	Curriculum agency	Secondary vocational school	Secondary industrial school	University	Pedagog. trng. secondary teachers	Secondary agricultural school	Pre-primary school	Special education class	Special education school	Research inst. phys-bio. sci.	Research inst. soc. sci.	Research inst. agriculture	Univ. faculties bio., chem., phys.	Research inst. economics	Spec. secondary indust. school	Univ. faculties soc. or anth.
1. Nepal	X	X	X	O	O	X	O	O	O	O	O	O	O	O	O	O	O	O
2. Laos	X	X	X	X	O	O	O	O	X	O	O	O	O	O	O	O	O	O
3. Cambodia	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	X	O
3. Burma	X	X	X	X	X	X	X	X	O	O	O	O	X	O	O	X	O	O
4. Mongolian People's Republic	X	O	O	X	X	X	X	X	X	O	O	O	O	X	X	X	X	O
4. Afghanistan	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O
5. Malaya	X	X	X	X	X	X	X	O	X	X	X	O	O	O	O	O	O	O
5. Ceylon	X	X	X	X	X	X	X	X	O	X	X	O	O	O	O	O	O	O
5. Thailand	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O
6. S. Korea	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	O	O
7. Philippines	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O
8. Pakistan	X	X	X	X	X	X	X	O	X	X	X	X	X	X	X	O	O	O
9. N. Korea	X	X	X	X	X	X	X	X	X	X	X	X	O	X	X	X	X	O
9. Indonesia	X	X	X	X	X	X	X	X	X	X	X	X	X	O	X	X	X	O
9. China (Mainland)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O
10. India	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10. China (Taiwan)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	X
10. Japan	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Figure 3. Scalogram of Educational Differentiation. D. Adams and J. P. Farrell, "Social Differentiation and Educational Differentiation." *Comparative Education,* 5 (1969), p. 255.

In Figure 5, Clark Kerr provides a variety of interesting iconic representations of educational systems that allows for greater variation of configuration than found in, for example, Figures 1 and 2. Figure 5 presents pure geometric forms as best representing the complex reality of situated variations in national higher education systems and policies around the world, yet it retains a strong TR logocentric/mimetic style.

Figure 6 introduces a meta-theoretical and highly differentiated systems model for comparing "functional subsystems of society" and "styles of . . . comparative . . . thinking." This monumental figuration introduces for the first time in our TR representations "the observer's point of view" but only in a fixed either/or, stop/go, relay circuit that privileges the appearance of order and binary logic over any possibility for observer (or actor) subjectivity or intersubjectivity in social life. How this totalizing theoretical model of "self-referential systems" might find utility in practice remains to be seen.

Figure 7 would seem to indicate something of a return to the naive realism of the 1960s with its arbitrary levels, frozen boxes and suggestion of an ordered, knowable--and manageable--educational and social world. While the authors' verbal text claims that their figure can "help identify perspectives" and open research to "alternative perspectives," their rigid visual model would seem to privilege geometric order at the expense of possibilities for a more open exchange of interpretations, or a representation of the other in her voice. They claim that their ". . . framework for multilevel analysis . . . can help identify the perspectives from which educational phenomena have and have not been investigated" (p. 488). How can this be when the representation--in contrast to Figure 1--would seem blind (and closed) to all scopic regimes but its own TR view?

In Figure 8, we find as in Figure 5, idealized models of a situated educational reform practice. While these so-called "qualitative models" seek to represent qualitative, or heuristic attributes, they seem to me more essentialist, arbitrary, and geometric in their ambition to imitate a real world. As such I would place them closer to the HC tradition, yet they are still essentially rationalist in style. The author's goal of ". . . coalescing . . . different realities into a truly functional, unified model" (p. 13) also suggests the application, conscious or not, of an TR visual code.

With the polarized figure presented in Figure 9, the first example of a critical rationalist visual subculture appeared in 1971. This scopic regime has much in common with

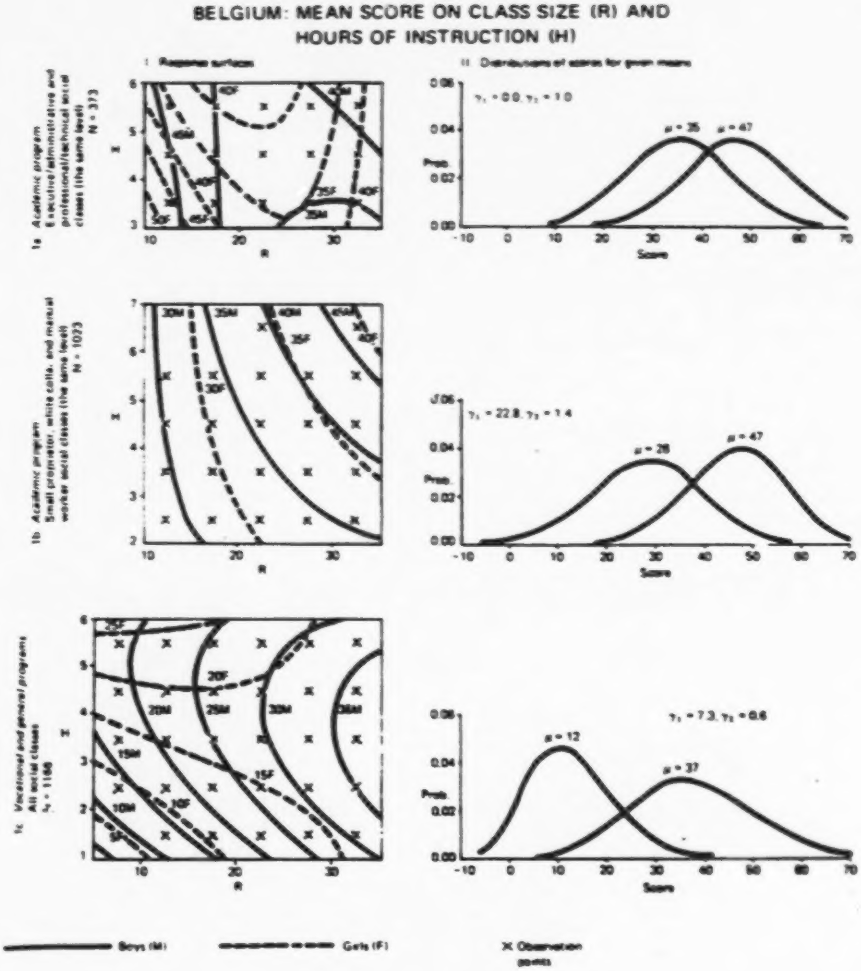
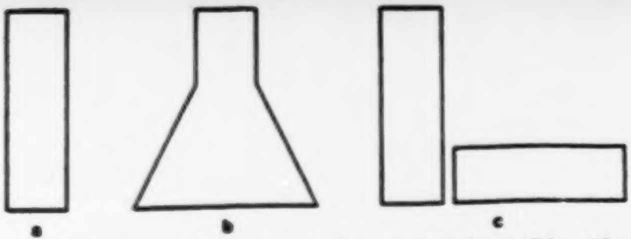
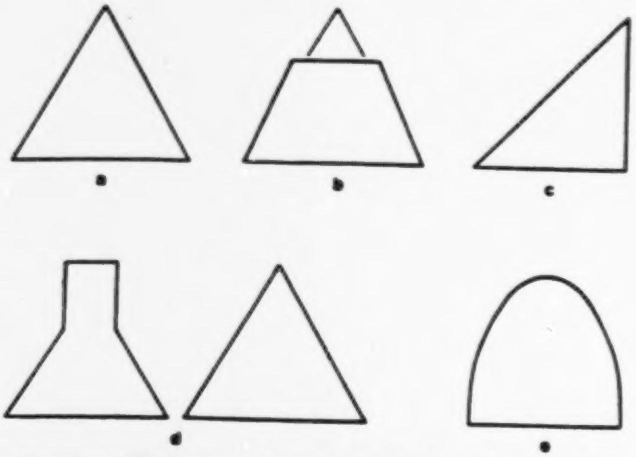


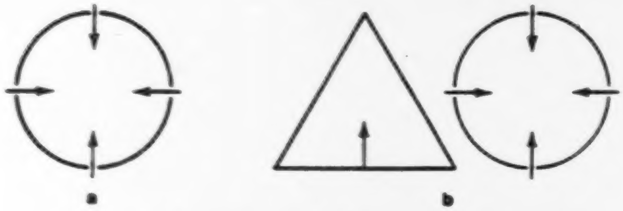
Figure 4. Belgium: Mean Score on Class Size (R) and Hours of Instruction (H). J. Lindsey, "A Reanalysis of Class Size and Achievement in the I.E.A. Mathematics Study," *Comparative Education Review*, 18, no. 2 (1974), p. 317.



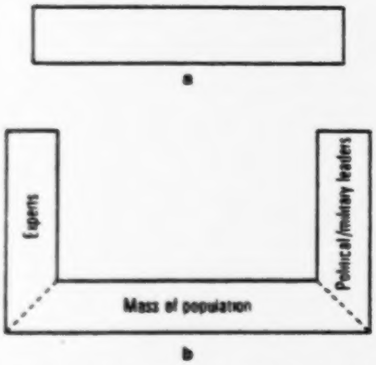
a, Hereditary elitist; *b*, Meritocratic elitist; *c*, Hereditary elitist with separate mass elementary system.



a, Pure pyramid; *b*, Truncated pyramid with reduced emphasis upon higher education, including research; *c*, Half pyramid directed toward civil-service occupations; *d*, Pyramid arising alongside an older elitist system; *e*, Advanced-stage pyramid.



a, Pure open access; *b*, Open access as an alternative



a, Horizontal-egalitarian; *b*, Modified horizontal approach with elite groups

FIG. 5.—Atomistic education

Figure 5. Iconic Representations of Educational Systems. C. Kerr, "Five Strategies for Education and Their Major Variants", *Comparative Education Review*, 23, no. 2 (1979), pp. 173-178.

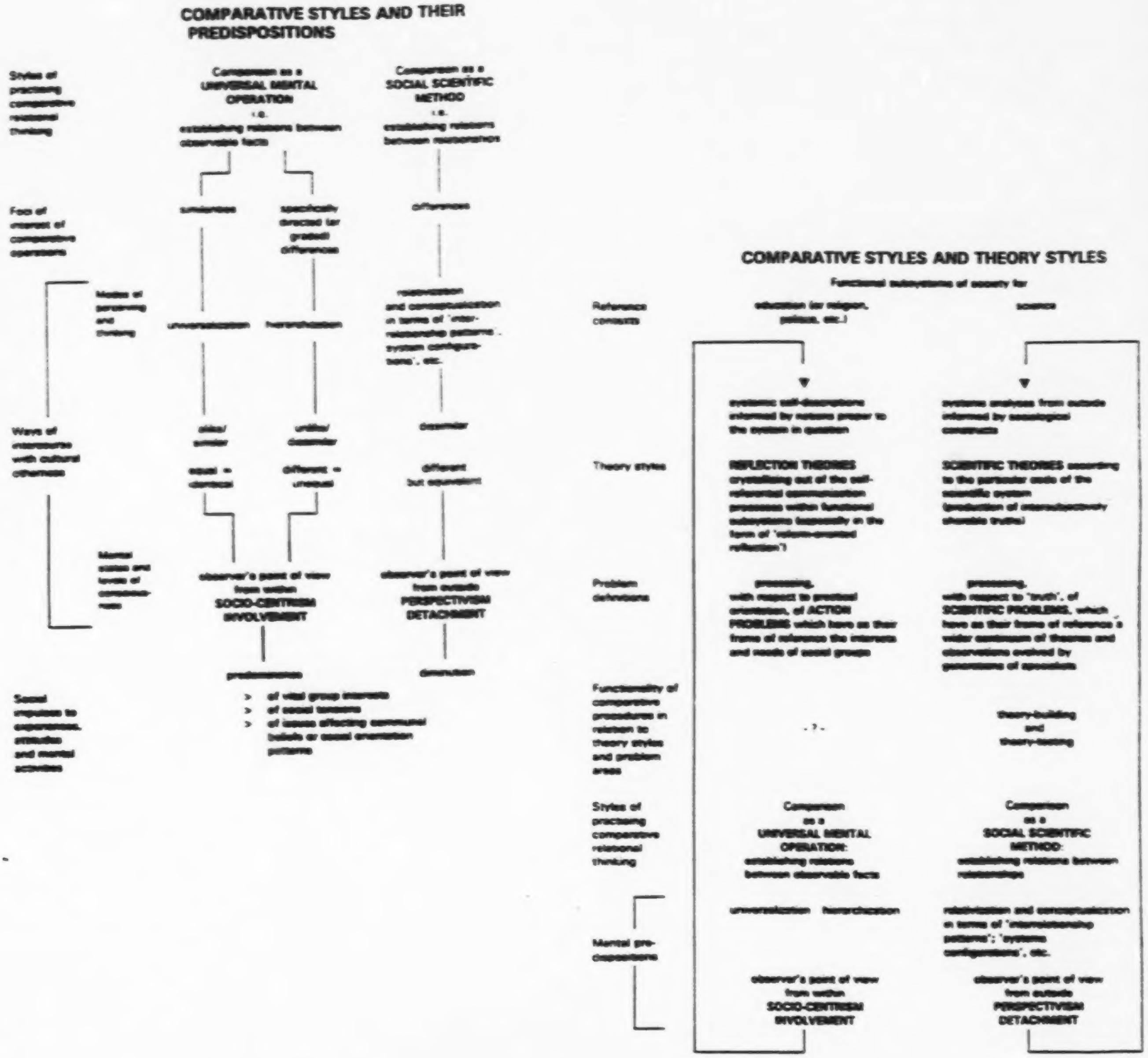

COMPARATIVE STYLES AND THEIR PREDISPOSITIONS
Styles of practising comparative relational thinking
Comparison as a UNIVERSAL MENTAL OPERATION i.e. establishing relations between observable facts
Comparison as a SOCIAL SCIENTIFIC METHOD i.e. establishing relations between relationships
Foci of interest of comparative operations
similarities
specifically directed (or gradual) differences
differences
Modes of perceiving and thinking
universalization
hierarchization
relativization and conceptualization in terms of 'inter-relationship patterns', 'system configurations', etc.
Ways of intercourse with cultural otherness
alike/similar
unlike/dissimilar
dissimilar
equal = identical
different = unequal
different but equivalent
Mental states and levels of consciousness
observer's point of view from within
SOCIO-CENTRISM
INVOLVEMENT
observer's point of view from outside
PERSPECTIVISM
DETACHMENT
predominance
> of vital group interests
> of social tensions
> of issues affecting communal beliefs or social orientation patterns
domination
Social impulses to experiences, attitudes and mental activities
COMPARATIVE STYLES AND THEORY STYLES
Functional subsystems of society for
Reference contexts
education (or religion, politics, etc.)
science
systemic self-descriptions informed by notions proper to the system in question
systemic analyses from outside informed by sociological constructs
Theory styles
REFLECTION THEORIES crystallising out of the self-referential communication processes within functional subsystems (especially in the form of 'reform-oriented reflection')
SCIENTIFIC THEORIES according to the particular code of the scientific system (production of intersubjectively shareable truths)
Problem definitions
processing, with respect to practical orientation, of ACTION PROBLEMS which have as their frame of reference the interests and needs of social groups
processing, with respect to 'truth', of SCIENTIFIC PROBLEMS, which have as their frame of reference a wider continuum of theories and observations evolved by generations of specialists
Functionality of comparative procedures in relation to theory styles and problem areas
- ? -
theory-building and theory-testing
Styles of practising comparative relational thinking
Comparison as a UNIVERSAL MENTAL OPERATION: establishing relations between observable facts
Comparison as a SOCIAL SCIENTIFIC METHOD: establishing relations between relationships
universalization
hierarchization
relativization and conceptualization in terms of 'interrelationship patterns'; 'systems configurations', etc.
Mental pre-dispositions
observer's point of view from within
SOCIO-CENTRISM
INVOLVEMENT
observer's point of view from outside
PERSPECTIVISM
DETACHMENT

Figure 6. Comparative Styles and Their Predispositions. J. Schriewer, "The Method of Comparison and the Need for Externalization: Methodological Criteria and Sociological Concepts," in *Theories and Methods in Comparative Education* J. Schriewer and B. Holmes, eds. (Frankfurt am Main: Peter Lang, 1988), pp. 40 & 52.

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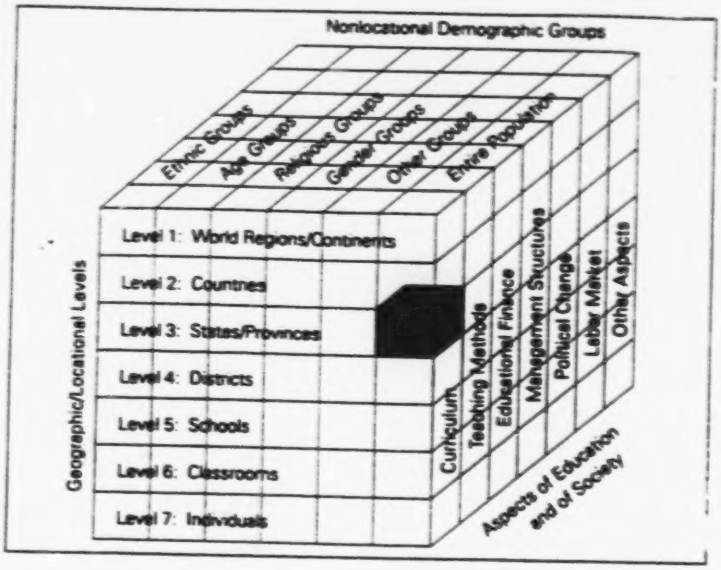

Figure 7. A Framework for Comparative Education Analysis. M. Bray and M. Thomas, "Levels of Comparison in Educational Studies, "*Harvard Educational Review*" 65, no. 3 (1995), p.475.

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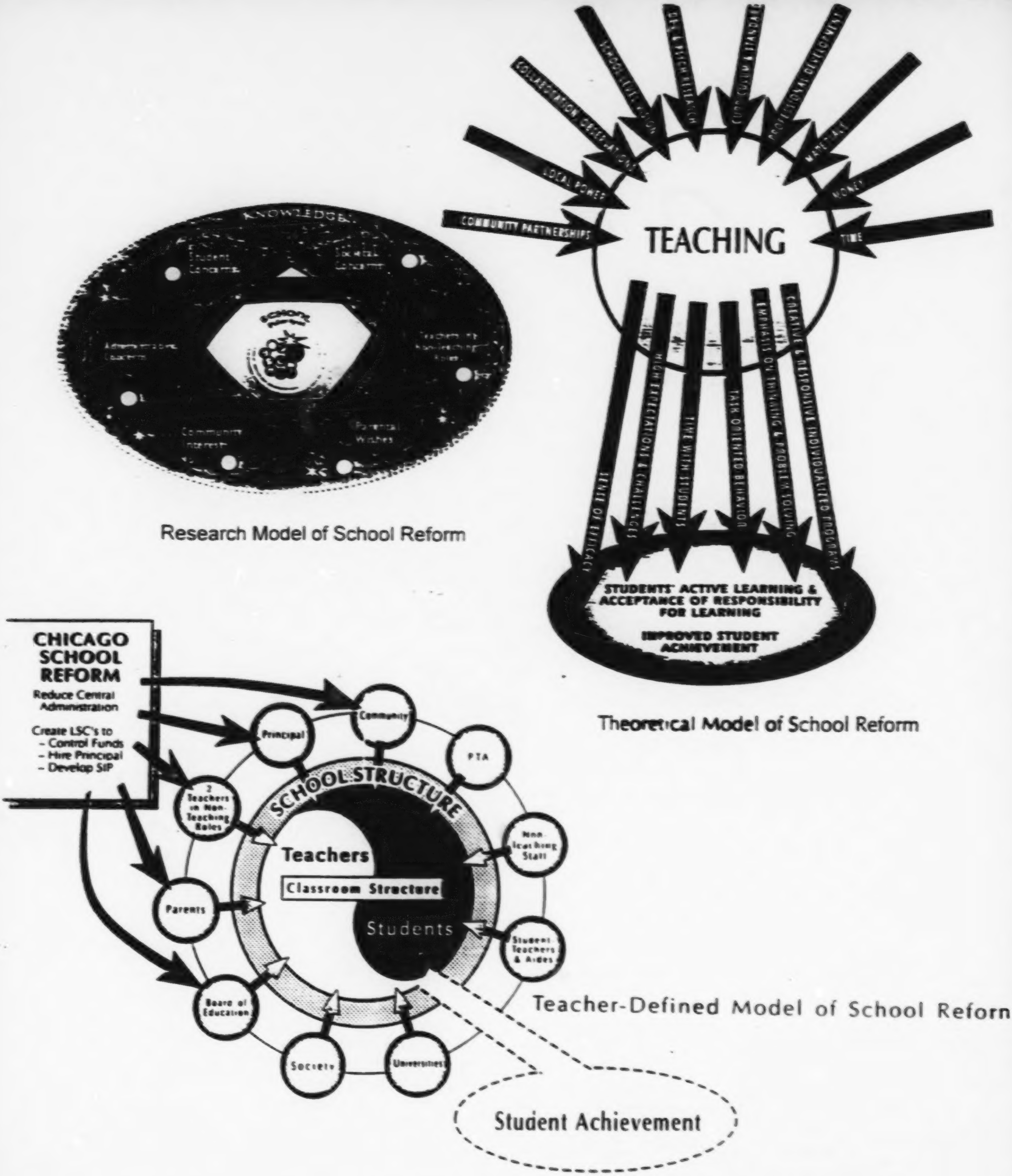


Research Model of School Reform

Theoretical Model of School Reform

Teacher-Defined Model of School Reforn

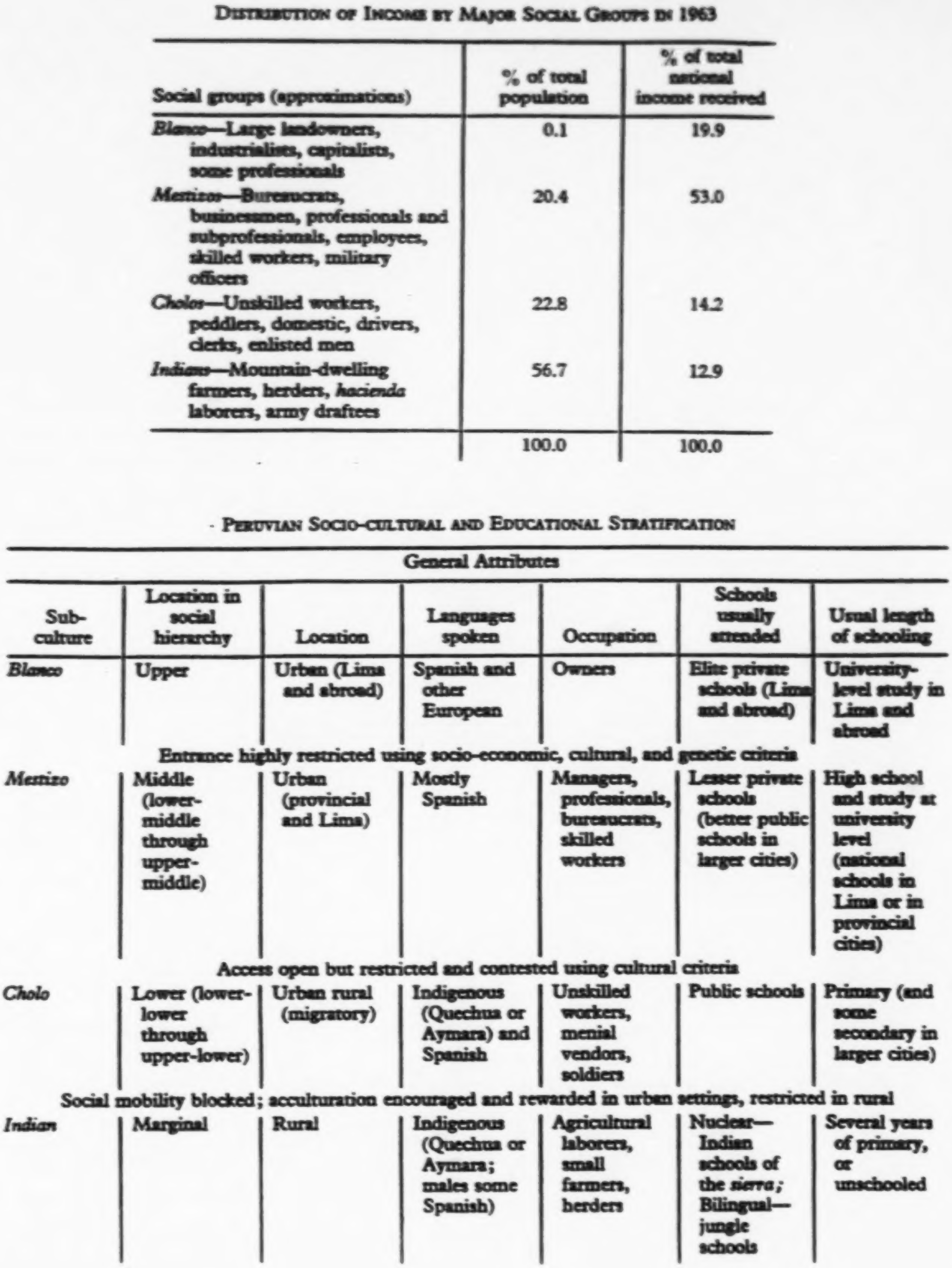
Figure 8. Theoretical, Research and Teacher-Defined Models of School Reform. M.L. Radnofsky, "Qualitative Models: Visually Representing Complex Data in an Image/Text Balance." *Qualitative Inquiry* 2, no. 4 (1996). Forthcoming.

TR style representations--i.e., it is realist, it is usually framed with vertical and horizontal lines, it is also materialist (historical materialist, not scientific materialist), logocentric, (albeit with ideology dominant), Eurocentric, male gendered, configured in stages, and infused with a belief in Enlightenment meliorism and a promise of progress through historical and developmental stages.

The critical rationalist figuration differs significantly from the TR view, however, with a proclivity to visually polarize social groups, to represent a commitment to dialectical analysis, and to present a visualization of structured subordination. Where the TR view sees and accepts hierarchy in a real world, the CR view problematizes that hierarchy, with notions of correspondence and reproduction, and seeks to overturn it in favor of more equalitarian structures.[9] Social relations most often are configured as a negative correspondence, as in Figure 9, between social status and educational provision and outcomes. This negative dialectic drives the visual reality of CR presentation, as in a flagrant bi-polarization of paradigms (Figure 10); or in a typology of different strategies to overcome structured educational inequality, (Figure 11); or as a cool and rationally ordered figuration of superordinate and subordinate positions (Figure 12) that completely avoids any critical terminology in the verbal text.

In Figure 13, CR representation reaches a higher level of critical sophistication. Beginning with a "real world" map of Disneyland, Marin charts his way with semantic and semiological analysis to a visual "ideological representation" that deconstructs both the real Disneyland and the capitalist myth constructing the United States. To support his contention that a degenerate utopia is ideology mapped into the form of a myth, Marin illustrates structuralist--and critical rationalist--figuration practice in creating meaning out of space. Here, his three-part representation of the original Disneyland reveals the interplay--and "deep structure"--of mapped geographical, semiotic, and ideological space. Marin argues that ". . . by acting out Disney's utopia, the visitor realizes the ideology of America's dominant groups as a mythic founding narrative for their own society" (p. 241). Thus, Marin provides a picture of the United States as an "evil empire" at about the same time that President Reagan using narration constructed the USSR as his "evil empire."

Figure 14 also privileges a CR world view and idealizes this view into what might be seen as an "Emancipatory Disneyland" portraying and corresponding with the mythic space of a real ideological world. Where Figure 13 is a critique, Figure 14 radiates the energy and idealism of a somewhat late (i.e., highly differentiated) Freirian utopia.



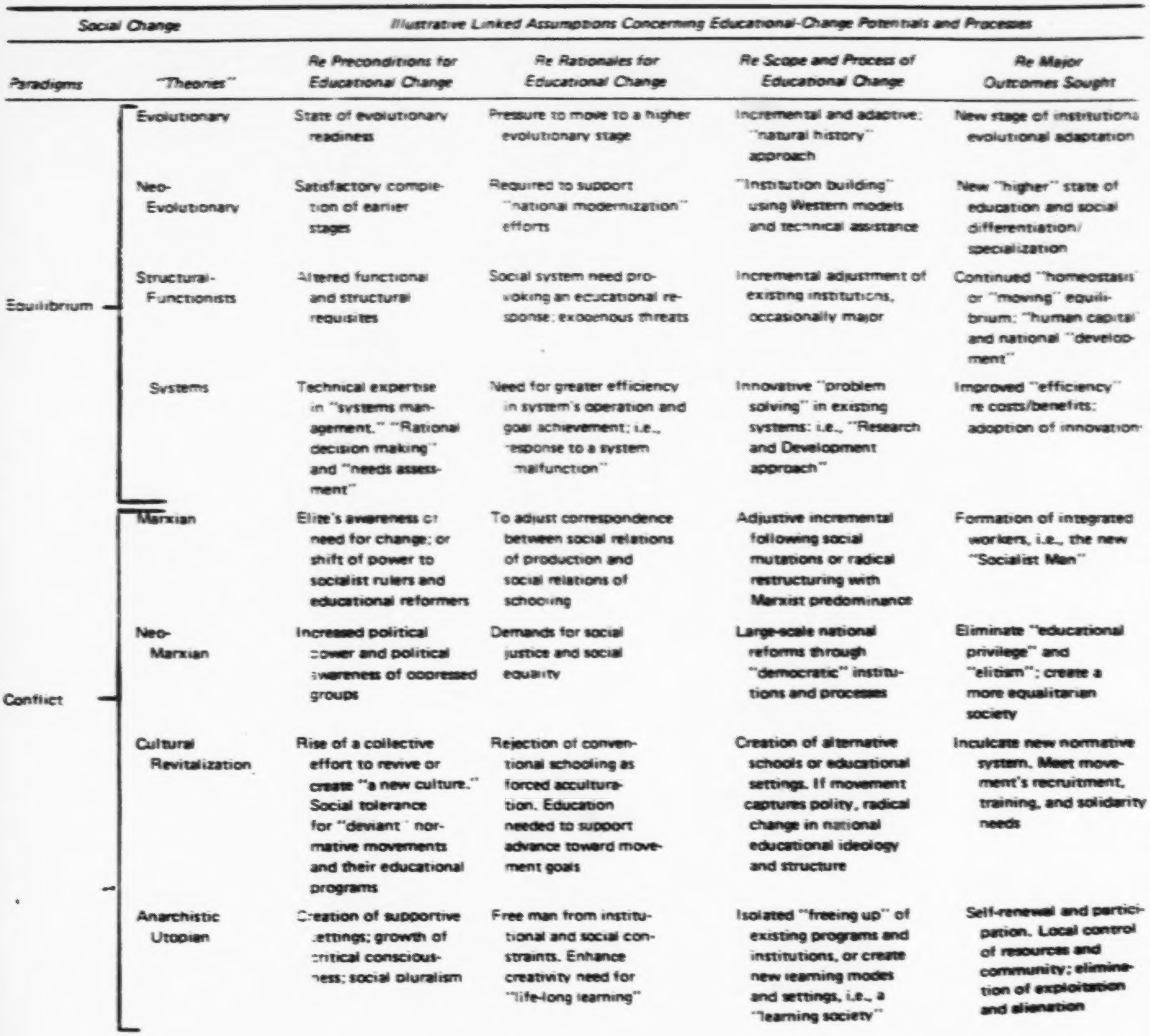
DISTRIBUTION OF INCOME BY MAJOR SOCIAL GROUPS IN 1963

Social groups (approximations)	% of total population	% of total national income received
Blanco—Large landowners, industrialists, capitalists, some professionals	0.1	19.9
Mestizos—Bureaucrats, businessmen, professionals and subprofessionals, employees, skilled workers, military officers	20.4	53.0
Cholos—Unskilled workers, peddlers, domestic, drivers, clerks, enlisted men	22.8	14.2
Indians—Mountain-dwelling farmers, herders, *hacienda* laborers, army draftees	56.7	12.9
	100.0	100.0

PERUVIAN SOCIO-CULTURAL AND EDUCATIONAL STRATIFICATION

Sub-culture	General Attributes					
	Location in social hierarchy	Location	Languages spoken	Occupation	Schools usually attended	Usual length of schooling
Blanco	Upper	Urban (Lima and abroad)	Spanish and other European	Owners	Elite private schools (Lima and abroad)	University-level study in Lima and abroad
Entrance highly restricted using socio-economic, cultural, and genetic criteria						
Mestizo	Middle (lower-middle through upper-middle)	Urban (provincial and Lima)	Mostly Spanish	Managers, professionals, bureaucrats, skilled workers	Lesser private schools (better public schools in larger cities)	High school and study at university level (national schools in Lima or in provincial cities)
Access open but restricted and contested using cultural criteria						
Cholo	Lower (lower-lower through upper-lower)	Urban rural (migratory)	Indigenous (Quechua or Aymara) and Spanish	Unskilled workers, menial vendors, soldiers	Public schools	Primary (and some secondary in larger cities)
Social mobility blocked; acculturation encouraged and rewarded in urban settings, restricted in rural						
Indian	Marginal	Rural	Indigenous (Quechua or Aymara; males some Spanish)	Agricultural laborers, small farmers, herders	Nuclear—Indian schools of the *sierra;* Bilingual—jungle schools	Several years of primary, or unschooled

Figure 9. Peruvian Socio-cultural and Educational Stratification. R.G. Paulston, *Society Schools, and Progress in Peru* (Oxford: Pergamon Press, 1971), pp. 92 & 94.



Social Change		*Illustrative Linked Assumptions Concerning Educational-Change Potentials and Processes*			
Paradigms	*"Theories"*	*Re Preconditions for Educational Change*	*Re Rationales for Educational Change*	*Re Scope and Process of Educational Change*	*Re Major Outcomes Sought*
Equilibrium	Evolutionary	State of evolutionary readiness	Pressure to move to a higher evolutionary stage	Incremental and adaptive; "natural history" approach	New stage of institutions evolutional adaptation
	Neo-Evolutionary	Satisfactory completion of earlier stages	Required to support "national modernization" efforts	"Institution building" using Western models and technical assistance	New "higher" state of education and social differentiation/specialization
	Structural-Functionists	Altered functional and structural requisites	Social system need provoking an educational response; exogenous threats	Incremental adjustment of existing institutions, occasionally major	Continued "homeostasis" or "moving" equilibrium; "human capital" and national "development"
	Systems	Technical expertise in "systems management," "Rational decision making" and "needs assessment"	Need for greater efficiency in system's operation and goal achievement; i.e., response to a system malfunction"	Innovative "problem solving" in existing systems; i.e., "Research and Development approach"	Improved "efficiency" re costs/benefits; adoption of innovation
Conflict	Marxian	Elite's awareness of need for change; or shift of power to socialist rulers and educational reformers	To adjust correspondence between social relations of production and social relations of schooling	Adjustive incremental following social mutations or radical restructuring with Marxist predominance	Formation of integrated workers, i.e., the new "Socialist Man"
	Neo-Marxian	Increased political power and political awareness of oppressed groups	Demands for social justice and social equality	Large-scale national reforms through "democratic" institutions and processes	Eliminate "educational privilege" and "elitism"; create a more equalitarian society
	Cultural Revitalization	Rise of a collective effort to revive or create "a new culture." Social tolerance for "deviant" normative movements and their educational programs	Rejection of conventional schooling as forced acculturation. Education needed to support advance toward movement goals	Creation of alternative schools or educational settings. If movement captures polity, radical change in national educational ideology and structure	Inculcate new normative system. Meet movement's recruitment, training, and solidarity needs
	Anarchistic Utopian	Creation of supportive settings; growth of critical consciousness; social pluralism	Free man from institutional and social constraints. Enhance creativity need for "life-long learning"	Isolated "freeing up" of existing programs and institutions, or create new learning modes and settings, i.e., a "learning society"	Self-renewal and participation. Local control of resources and community; elimination of exploitation and alienation

Figure 10. Relations Between Theories of Social and Educational Change/ Reform. R. G. Paulston, "Social and Educational Change: Conceptual Frameworks," *Comparative Education Review* 21, nos. 2/3 (1977), pp. 372 & 373.

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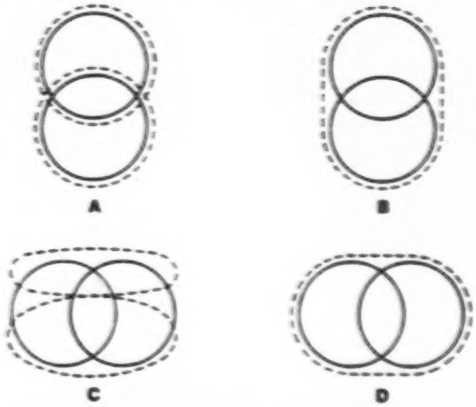
A Typology of Ethnic Education Programs

Degree of Normative and Structural Change Sought	High	*Alternative Programs:* i.e., Black, Chicano, Native American, Studies' Enclaves in Higher education; Some Formal School Bilingual Education Programs	*Transformative Programs:* i.e., Black Panther, American Indian Movement, and other Militant Ethnic Movement Programs.
	Low	*Supplemental Programs:* i.e., Bilingual and Ethnic Heritage Programs in Formal Schools	*Defensive Programs*: i.e., Amish, Swede-Finn, Saxon German, and Most Reservation Indian Programs, Danish-American Folk High School Programs, Hebrew Schools, and Nation of Islam
		Low	High
		Degree of Ethnic Control	

Figure 11. A Typology of Ethnic Education Programs, R.G. Paulston, "Separate Education as an Ethnic Survival Strategy," *Anthropology and Education Quarterly* 8, no. 3 (1977), p.186.



Types of intergroup relations; Type A. Cultural and structural segmentation in a vertical relationship. Type B. Cultural segmentation and structural commonality in a vertical relationship. Type C. Cultural and structural segmentation in a horizontal relationship. Type D. Cultural segmentation and structural commonality in a horizontal relationship. —— indicates cultural boundaries; —— indicates structural boundaries.

Figure 12. Types of Intergroup Relations. T.J. LaBelle and P.S. White, "Education and Multiethnic Integration: An Intergroup-Relations Typology," *Comparative Education Review*, 24, no. 2 (1980), p. 158.

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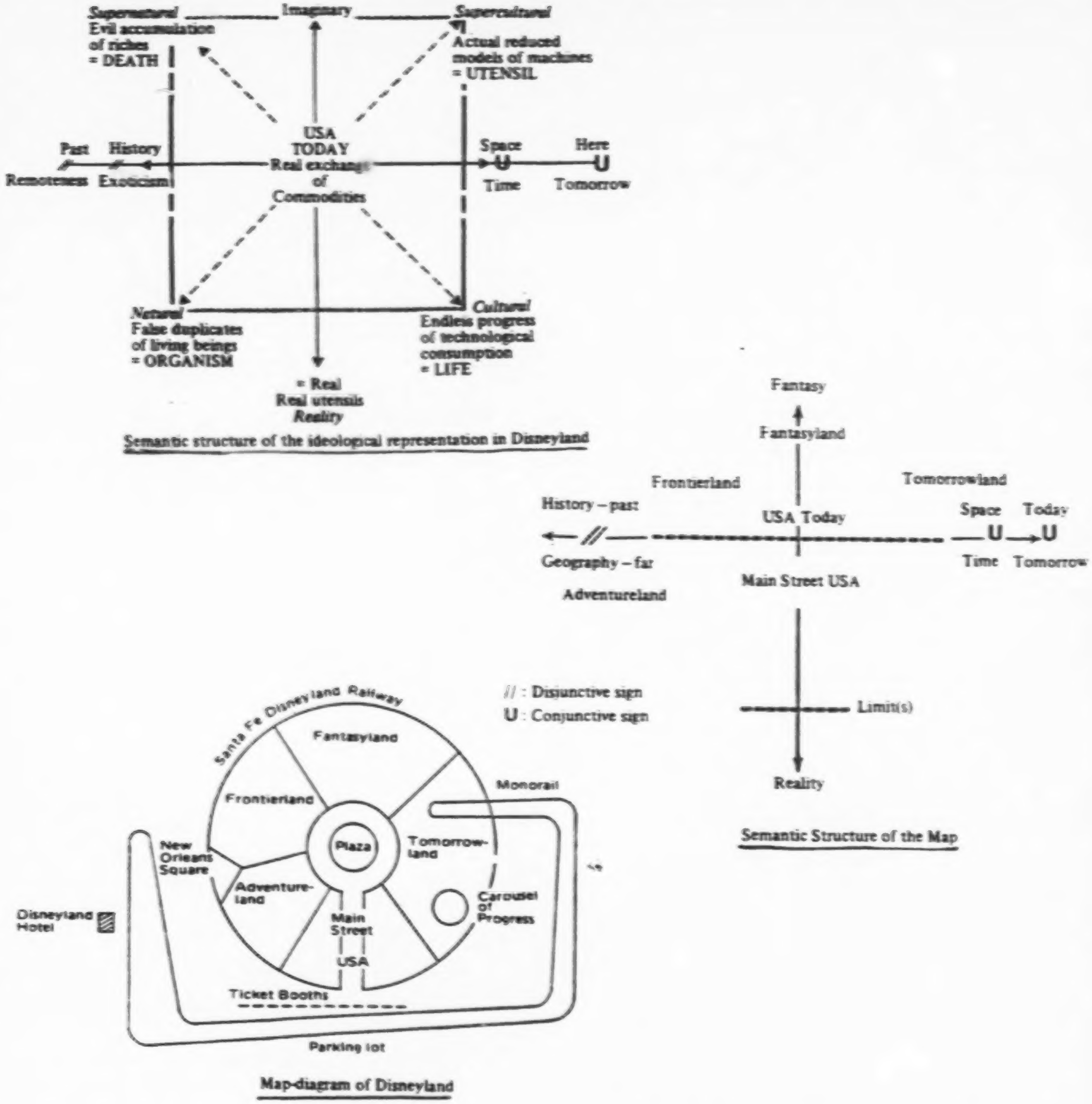

Semantic structure of the ideological representation in Disneyland

Semantic Structure of the Map

Map-diagram of Disneyland

Figure 13. Map Diagrams of Disneyland: Semantic Structure of the Map, Semantic Structure of the Ideological Representation. L. Marin, *Utopics: The Semiological Play of Textual Spaces* (Atlantic Highlands, NJ: Humanities Press, 1990), pp. 251, 252, & 257.

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With a shift from the critical rational and towards the hermeneutical way of seeing, our eye moves to the left, and a bit up on the map in Figure 1. Work in the hermeneutical constructivist tradition seeks to pattern the process of intersubjective world-making. It is open to narrative art and indeterminacy. It prizes insight and understanding and, while demanding a credible story, it refuses to be fixed, boxed, or theoretically overdetermined. Most of all, the HC view stoutly defends the centrality of desire, and the possibility for joy. It rejects the notion of Cartesian detachment where the observer, (as in Figures 2-8) is claimed to be free of all emotional involvement in that which is represented. It is a world view where stories and image are believed to possess the power to change minds and bodies, where metaphor is seen to be the last magic on earth. With the emergence of feminist scholarship in the 1970s this embodied scopic regime has flourished in cultural studies and the human sciences, but it is, rarely, if ever, found in comparative education discourse.

Figure 15 presents paradigmatic worlds discovered through discourse analysis and may be seen as a marginal example of the HC subculture. But it is constrained by the closed boxes and seeming fear of intersubjective messiness, attributes more akin to the TR genre. It retains the "regulation--radical change" polarity of CR-type figures, but is constructed using discourse analysis and would seem to have no more than heuristic ambition. In sum, Figure 15 encompasses aspects of all the scopic regimes of modernity.

Figure 16 also constructs a world of discourse relations (in comparative education) using textual analysis. While this visual representation now moves closer to the heuristic pole, it continues to pattern this world using vertical and horizontal dimensions in a Eurocentric style matrix that moves from left to right. Any binary compulsion, has, however, been left out and the verbal text now reflexively questions "Characteristics of textual relations" for the first time in comparative education discourse

In Figure 17, the world of children's storymaking is visualized as a multicontextual and interconnected web of possible relations, contacts, and influences. This figure suggests the hum and buzz of human experience.[10] Here reality is not mimed or mirrored but is constructed *in situ* as an ongoing process centered in the actor who is free to move without logocentric determinants or frozen spatial choices. For the first time an illustrative figure in comparative education discourse is strongly female gendered.

But as Figure 18 demonstrates, this HC world of world-making can also be manipulated by power to produce self-serving Utopias that exist nowhere. Figure 18 patterns world-making in the service of ideology and serves as a warning that romantic

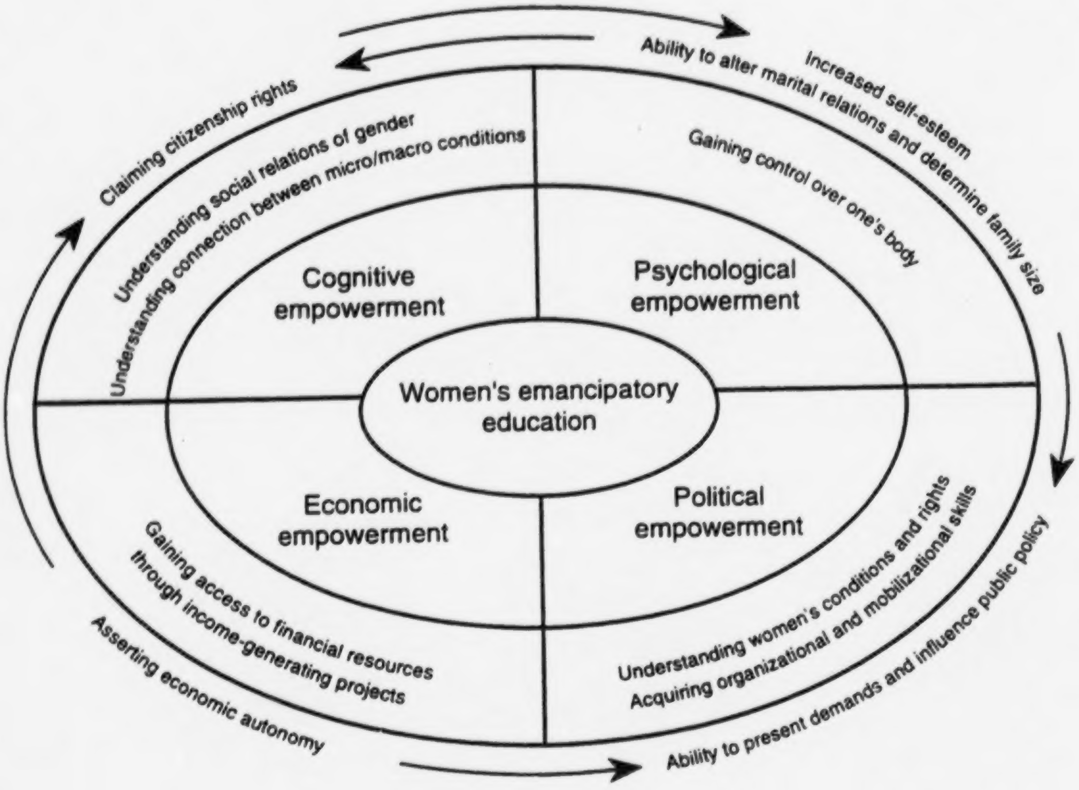
Women's emancipatory education
Cognitive empowerment
Psychological empowerment
Economic empowerment
Political empowerment
Claiming citizenship rights
Understanding social relations of gender
Understanding connection between micro/macro conditions
Increased self-esteem
Ability to alter marital relations and determine family size
Gaining control over one's body
Gaining access to financial resources through income-generating projects
Asserting economic autonomy
Understanding women's conditions and rights
Acquiring organizational and mobilizational skills
Ability to present demands and influence public policy

Figure 14. A Conceptualization of Education From an Empowerment Perspective. N. Stromquist,"Mapping Gendered Spaces in the Third World Educational Interventions," in R.G. Paulston, ed. *Social Cartography: Mapping Ways of Seeing Social and Educational Change* (New York:Garland, 1996), p. 238.

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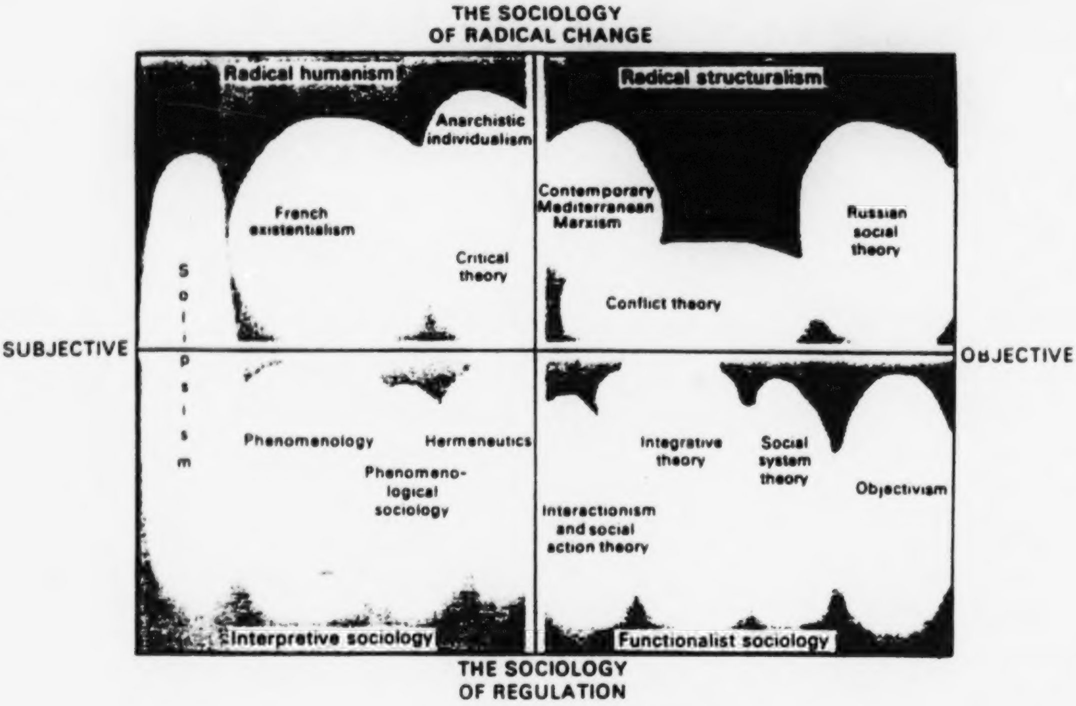
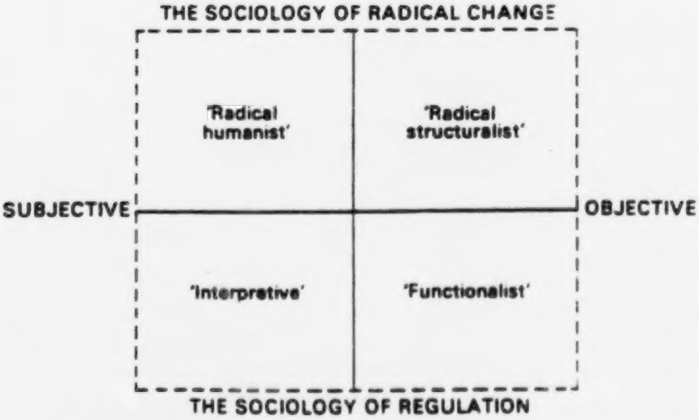


The four sociological paradigms



Four paradigms for the analysis of social theory

Figure 15. Four Paradigms for the Analysis of Social Theory, G. Burrell and G. Morgan, *Sociological Paradigms and Organizational Analysis* (Portsmouth, NH: Heinemann, 1979), pp. 22 & 29.

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Characteristics of textual representations	Linear 1950s–1960s	Branching 1970s–1980s	Interwined 1990s
Knowledge control and organization:	Orthodoxy: hierarchial and centralized	Heterodoxy: emergence of "neo" variants and new inquiry perspectives	Heterogeneity: Disputatious yet complimentary knowledge communities
Knowledge relations:	Hegemonic and totalizing	Paradigm clash, i.e., "either/or" competition of incommensurable world views	Emergent post-paradigmatic, i.e., rhizomatic and interactive
Knowledge ontology:	Realist views predominate	Realist and relativist views contest reality	More perspectivist views encompass multiple realities and perspectives
Knowledge framing:	Functionalism and positivism dominant	Functionalist, critical and interpretative views compete and decenter	More eclectic, reflextive, and pragmatic
Knowledge style:	Parsimonious and value-free	Agonistic and partisan	Increasingly intertextual, ecologistic, and contingent
Knowledge gender:	Maleness: logic dominant	Feminist ideas emerge, compete, decenter	Gender issues more open and indeterminate
Knowledge emotions:	Optimism and confidence	Disdain, incredulity, or exhilaration	Ambivalence, i.e., nostalgia for certainty; delight in diversity
Knowledge products:	Law-like crossnational statements the ideal	Competing ideologies	Explanation, interpretation, simulation, translation and mapping
Illustrative texts:	Adams and Farrell (1969), Anderson (1961), Bereday (1964); Husén (1967); Noah and Eckstein (1969)	Anderson (1977), Bourdieu and Passeron (1977), Bowles and Gintis (1976), Carnoy (1984), Clignet (1981), Epstein (1983), Heyman (1979), Husén (1988), Karabel and Halsey (1977), Kelly and Nihlen (1982), Paulston (1977)	Altbach (1991), Cowen (1990), Lather (1991), Masemann (1990), Paulston (1990, 1993), Paulston and Tidwell (1992), Rust (1991), von Recum (1990)

Figure 16. Changing Representations of Knowledge in Comparative Education Texts, 1950's-1990's. R.G. Paulston, "Comparative Education: Paradigms and Theories" in T. Husen and N. Postlethwaite, eds. *International Encyclopedia of Education* (Oxford: Pergamon Press, 1994), p.924.

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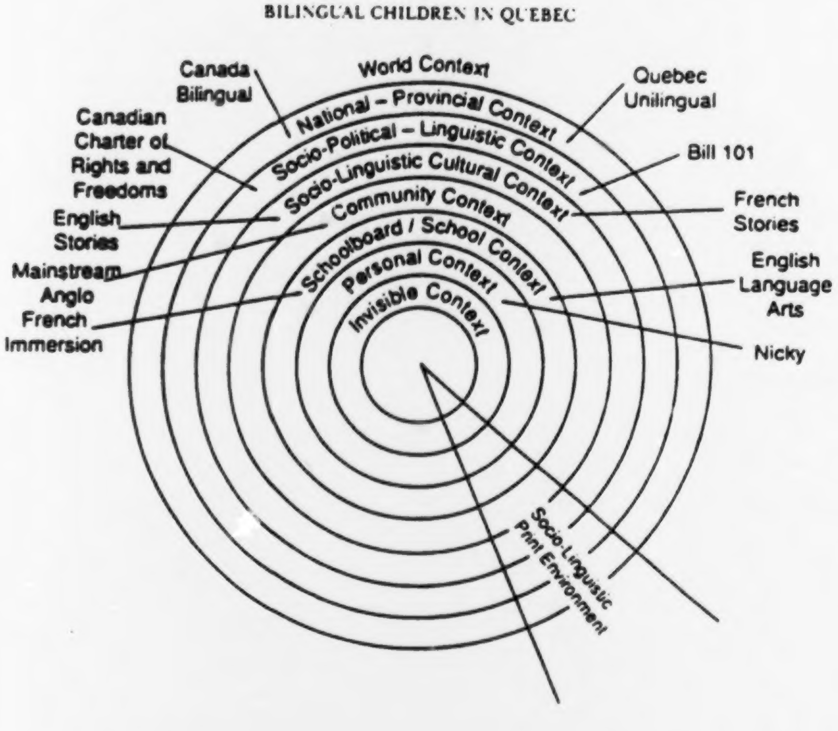
BILINGUAL CHILDREN IN QUEBEC
World Context
Canada Bilingual
Quebec Unilingual
Canadian Charter of Rights and Freedoms
Bill 101
English Stories
French Stories
Mainstream Anglo
English Language Arts
French Immersion
Nicky
National – Provincial Context
Socio-Political – Linguistic Context
Socio-Linguistic Cultural Context
Community Context
Schoolboard / School Context
Personal Context
Invisible Context
Socio-Linguistic Print Environment

Figure 17. The Nested Contexts of Children's Story Making. M. Maguire, "Cultural Stances Informing Storytelling Among Bilingual Children in Quebec." *Comparative Education Review* 38, no. 1 (1994), p. 121.

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hermeneuticism can, as with any scopic regime, serve propagandistic ends. To quote Gottlieb regarding this figure.

> The "Terra Incognita" of the professoriate was invented as much as discovered through a scientific instrument (i.e. the International questionnaire). Setting out to discover the professoriate worldwide entailed objectification of the real spaces professors occupy in their national context, much like the complex operation of a map, the art of inscribing and tying together places in a surface through networks of names and signs. By projecting the results of the International Survey onto a flat analogic model of the world, *The Chronicle of Higher Education* constructs the professoriate as a kind of "Leibniz's God" present everywhere. In contrast with reporting the results narratively, picturing them on a world map universalizes the International Survey. In other words, the utopic operation of the International Survey manifests itself in the relationship between the surveyor's gaze and the representation of this reality (i.e. the results collected by the survey). This map is nothing less than the visual Utopia of the professoriate (p. 264).

The mythopoeic worlds constructed and communicated in Figure 19 privilege a humanistic scopic tradition begun in the Classical period and still highly effective, especially with non-literate viewers, as in many traditional settings. Here Narcissus is portrayed as gendered female, is reflexive and part of nature. Faust (and the devil) are in contrast stereotypically male and are locked in a compulsive, regimented confrontation with nature. Structural differentiation may be seen to move in linear progression from left to right, as do Faust the developer and his minions doing the work of "progress."[11] This figure is clearly critical of development compulsions found in both TR and CR world-views and their agendas for progress. The Phoenix myth, in contrast, gives space to and accepts the CR ambition for transformation via radical process. Together, Figures 19 and 20 create worlds grounded in the classical humanist and ecological mythopoeic forms.

Based on an analysis of historical texts, Figure 21 charts a world of eras and "streams of thought" where historical cycles are depicted both textually and visually.
Mouat explains how this figuration captures a historical world of his making:

> It can be demonstrated that each phase of the cognitive cycle is manifest at the social level with sufficient distinction that historians give names to the phases. Hence, for western social development the terms Medieval, Renaissance, Baroque, Modern, and Postmodern refer to eras in which a particular phase of the cognitive cycle dominated or dominates the

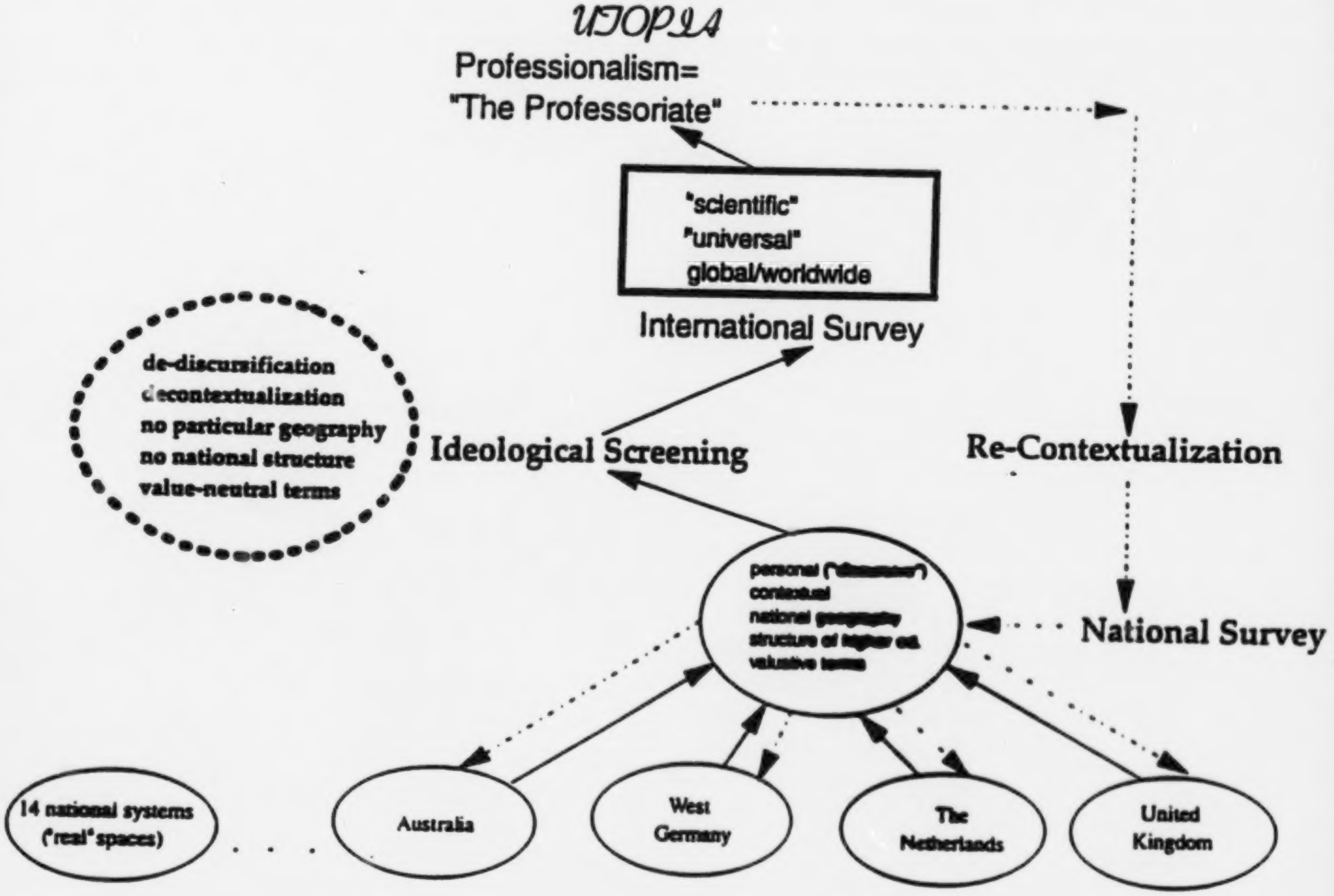

Figure 18. Construction of the Professoriate as the Utopia of Worldwide Professionalism. E. Gottlieb, "Mapping the Utopia of Professionalism" in R.G. Paulston, ed. *Social Cartography: Mapping Ways of Seeing Social and Educational Change* (New York: Garland, 1996), p. 263.

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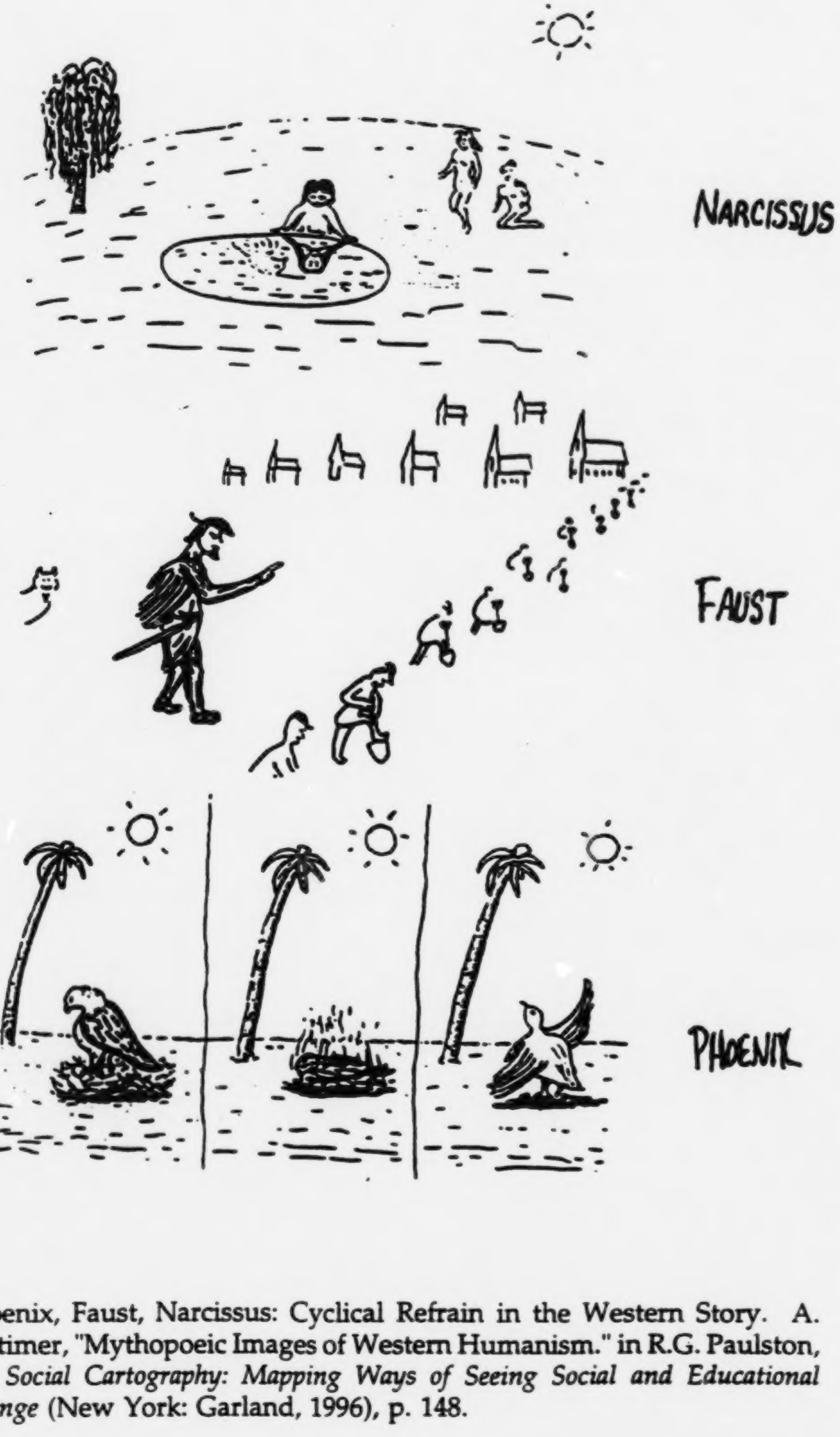

Figure 19. Phoenix, Faust, Narcissus: Cyclical Refrain in the Western Story. A. Buttimer, "Mythopoeic Images of Western Humanism." in R.G. Paulston, ed. *Social Cartography: Mapping Ways of Seeing Social and Educational Change* (New York: Garland, 1996), p. 148.

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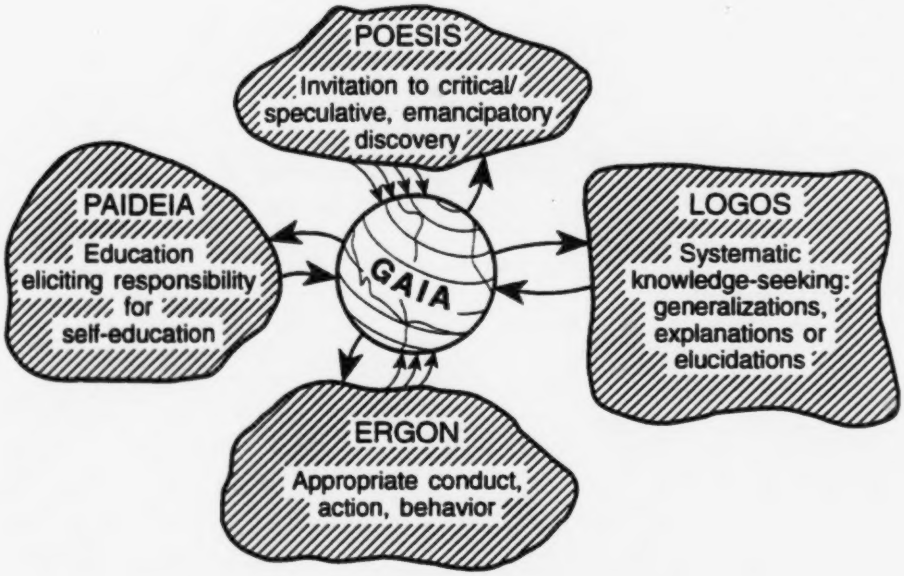
> social construction of knowledge. The validity of this observation is demonstrated when the hallmarks of differentiation, integration and synthesis--the phases comprising the cycle of human thought--are compared with the hallmarks of the eras in western development which have been previously identified by historians. When this is done it becomes apparent that the Medieval was primarily a differentiating era, the Renaissance was an integrating era, the Baroque was a synthesizing era, the Modern was a differentiating era once again, and the Postmodern is an integrating era.
>
> Moreover, each complete cycle of synthesis, differentiation and integration forms a stage in social development which finds its direct analogue not only in the cognitive cycle but also in the pattern of individual cognitive development. (Note that I have now placed synthesis at the beginning of the cycle since it is the synthesis phase which provides the conceptual framework that is articulated during the following differentiating and integrating eras.) When western social history and the pattern of individual cognitive development are compared, the Medieval era and the Renaissance are found to parallel the differentiating and integrating phases of the second cycle in the pattern of cognitive development, while the Baroque synthesis introduces the third cycle which is developed in the Modern age and completed in the Postmodern era (pp. 92-93).

Where Figure 19 recyles three images with a fatalistic regularity, Figure 21 identifies discrete historical eras and describes the rotation of their distinctive intellectual hallmarks with near clockwork precision. This work raises the level of heuristic representation in comparative education discourse to a new level, and boldly predicts that "mapping abstractions" will, by the logic of necessity, become our new scopic regime required to pattern the fragmentation and de-differentiation of today. But, as Baudrillard advises we must first invent a visual game able to render fixed positions reversible, able to help us see how the scopic regimes of modernity have sought to capture the strange and make it ordinary.[12] Today it would seem visual representation is challenged to uncouple the real and provide space to figure the flood of simulated worlds that aggressively compete for our attention.

Today, we are challenged to map out the new objective order of things--its immanent logic and ironic form. In a time when electronic media generate hyperreal models of a real seemingly without origin or reality i.e., the world as Disneyland or the World-Wide Web, the territory no longer precedes the map. Now it is the map that engenders the territory. With the world of human culture constituted through the work of signifying practices, our task today is to de-code and pattern this new reality of information networks and electronic communication without naive essentialism or undue nostalgia for the world we have lost.



POESIS
Invitation to critical/ speculative, emancipatory discovery
PAIDEIA
Education eliciting responsibility for self-education
GAIA
LOGOS
Systematic knowledge-seeking: generalizations, explanations or elucidations
ERGON
Appropriate conduct, action, behavior

Figure 20. Gaia: Global Challenge for the Practice of Geography, Education, and Knowledge. A. Buttimer, "Mythopolic Images of Western Humanism." in R.G. Paulston, ed. *Social Cartography: Mapping Ways of Seeing Social and Educational Change* (New York: Garland, 1996), p. 157.

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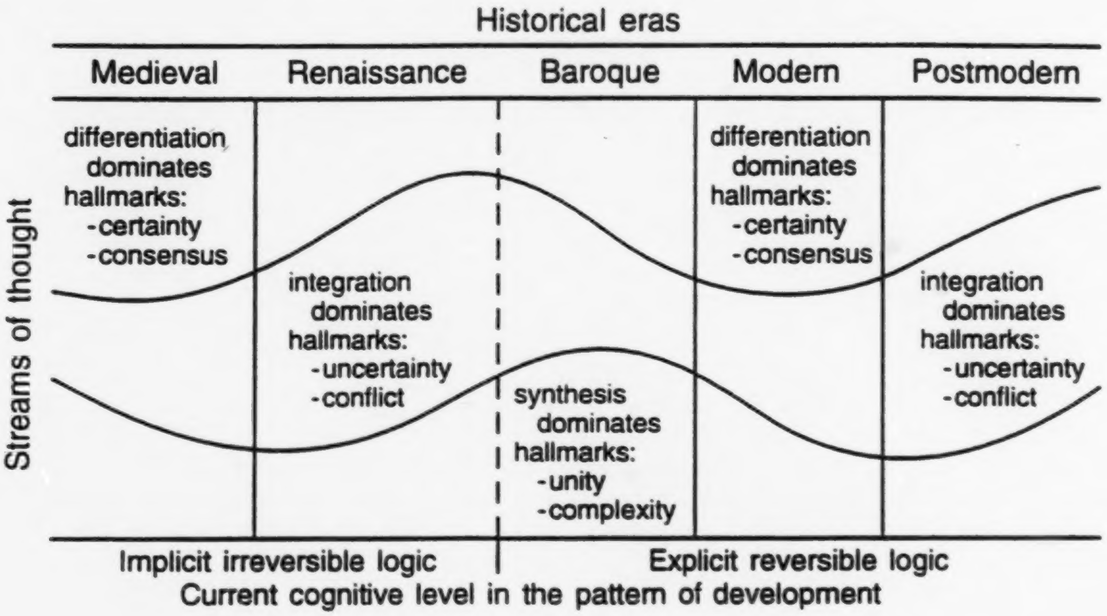
Historical eras
Medieval
Renaissance
Baroque
Modern
Postmodern
Streams of thought
differentiation dominates hallmarks: -certainty -consensus
integration dominates hallmarks: -uncertainty -conflict
synthesis dominates hallmarks: -unity -complexity
differentiation dominates hallmarks: -certainty -consensus
integration dominates hallmarks: -uncertainty -conflict
Implicit irreversible logic
Explicit reversible logic
Current cognitive level in the pattern of development

Figure 21. An Abstract Map of the Pattern of Cognitive Development in Western History. T.W. Mouat, IV, "The Timely Emergence of Social Cartography" in R.G. Paulston, ed. *Social Cartography: Mapping Ways of Seeing Social and Educational Change* (New York: Garland, 1996), p.92.

How one comparative educator has attempted to respond to this need to remap our field (and perhaps help it move to the forefront of comparative studies) is presented in the following section.

Part Two The Invention of A Social Cartography? A Personal Narrative/Journey

I went to the University of British Columbia (UBC) in Vancouver as a visiting professor in the summer of 1991 with the hope that a trip to the "frontier" might provoke some new ideas about representing knowledge and visualizing difference. Given the collapse of the cold war with its polarizing stories, and the emergence of provocative new ways of seeing in poststructuralist, postmodern feminist and postcolonial studies, the time seemed alive with opportunities to rethink our world, to sail off our brutal old maps. UBC is situated in a setting of vast panoramas of sea, forest, city and sky. I had ample time to converse, to read and discover. Texts by the postmodern geographers;[13] related studies by Bourdieu and the French poststructuralists[14] and some illuminating feminist cartographers[15] all helped me to understand better possibilities to remap my mind and my field. I also reflected on the failure of my conference paper of the year before, "Comparing Ways of Knowing across Inquiry Communities," to specify exactly how contradictory ideas and views of reality might be represented and compared in a more open or "free-form" manner.[16]

On returning to the University of Pittsburgh that Fall, I had begun to understand how a spatial turn in comparative studies would focus less on formal theory and competing truth claims and more on how contingent knowledge may be seen as embodied, locally constructed and visually represented as oppositional yet complimentary positionings in shifting fields. As Bateson points out, maps not only emphasize spatial relations, they also help to recognize and pattern difference.[17] By naming and classifying, maps help us "know" something so we can "see" something different. The problem with getting comparativists to think more globally or locally, for example, may be that this task is difficult to map because there is nothing but difference. What a confused comparative thinker may need is patterns interspersed among the differences."[18] This view would help me both to reconceptualize comparative studies as comparative mapping and to see it as situated, provisional and contested, i.e., as Donna Harraway advocates, as an ironic non-innocent practice. With the opening up of our vision and representations to multiple perspectives, we might also better move beyond the two great modernisms of positivism and Marxism with their rigid categorical thinking and abhorrence of the Other.

My efforts then turned to the crafting of a ground-level social cartography project with critical potential, one that would build upon and extend earlier postmodern mapping contributions in cultural geography, and in feminist, literary and postcolonialist studies. Work in this new genre uses spatial tropes to map intertextual fields. It shares the rejection of essentialism and scientism found in most feminist theory. It views the "ground" of our era as akin to a space of shifting sites and boundaries most credibly defined in relational terms. Where texts of modern geographers usually represented space as an innocent place of situated objects with fixed boundaries, coordinates and essences, texts of the postmodern cartographers mostly present an agonistic or contested space of continually shifting sites and boundaries perhaps best portrayed using "the transitory, temporal process of language."[19] Soja and Hooper explain this growing fascination with spatial analysis:

> We suggest that this spatialized discourse on simultaneously real and imagined geographies is an important part of a provocative and distinctly postmodern reconceptualization of spatiality that connects the social production of space to the cultural politics of difference in new and imaginative ways.[20]

At about this time, Don Adams invited me to write an encyclopedia entry titled, "Comparative Education: Paradigms and Theories."[21] I accepted, but with the proviso that the entry would in fact be post-paradigmatic, that is, it would use a perspectivist approach to "map" my view of increasingly complex conceptual relationships between the major discourse communities that compose the field. I presented this study, viewing comparison as a juxtaposition of difference, in July 1992, at the VIII World Congress of Comparative Education Societies at Charles University in Prague with a title more to my liking, "Comparative Education Seen as an Intellectual Field: Mapping the Theoretical Landscape." The paper sought to demonstrate how comparative education "after objectivity" can now make good sense "in perspective" by portraying a ludic play of different theoretical perspectives within the art form of social cartography.[22] (See Figure 22) This cartography avoids the rigidities of modernist social models and master narratives, as presented in Part One of this paper and shifts the research focus to current efforts by individuals and cultural groups seeking to be more self-defining in their sociospatial relations and in how they are represented. In this regard, Liebman has argued persuasively that while social mapping is open to all texts, it is a project of and for the postmodern era; it is a new method to identify changing perceptions of values, ideologies, and spatial relations. In social cartography he sees an alliance of education and cultural geography to develop a methodology consistent with the visualization of narratives in a time when people now realize their potential and place in the world quite differently than they did a few decades ago. In education, especially, he suggests that social mapping can assist students who desire to resolve personal questions of self in a world offering a multiplicity of truths and values. As in this paper, social maps are proposed as "a method of illustrating our vigorous social milieu composed of a profusion of narratives."[23] This is done with an emphasis on layered, or imbricated, fields of perception and intertextual space, an approach which draws in part upon the technique of chorography, that is, the mapping of domains or regions, and the ideas of a Arjun Appadurai--concerning disjunctures in the links among space, place, citizenship, and nationhood.[24]

Now, with the project of social cartography or free-form mapping well underway, it is fitting perhaps to recognize Joseph Seppi's admonition in his chapter in *Social Cartography* (forthcoming)[25] that "an attempt at formalizing the technique must follow." The nineteen multidisciplinary chapters that this new book all, in various ways and from

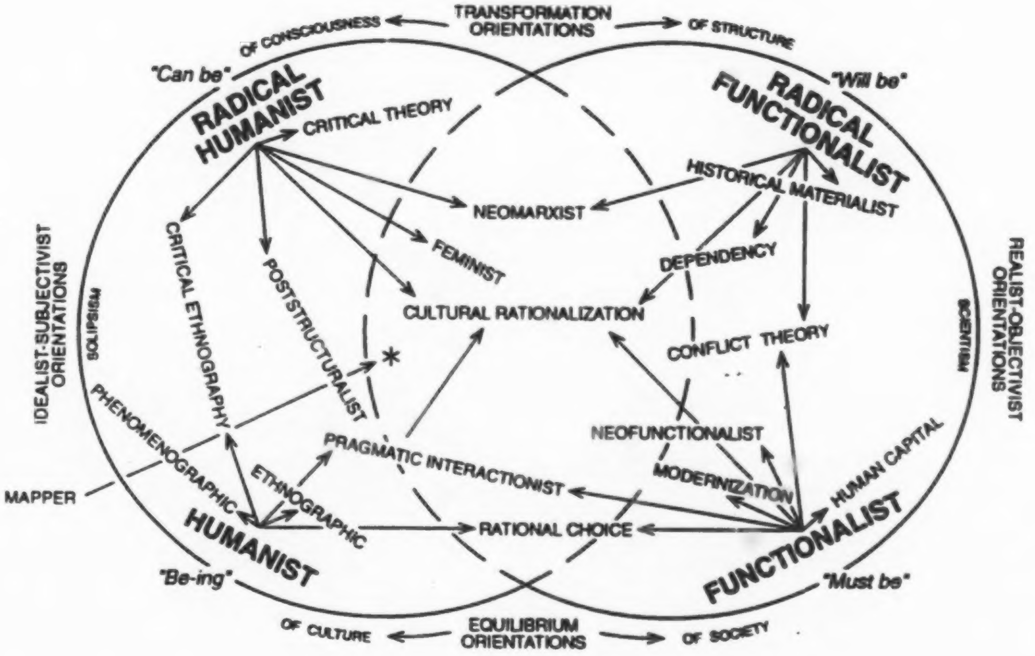

Figure 22. A Macro-Mapping of Paradigms and Theories in Comparative and International Education. R. G. Paulston, Comparative Education as an Intellectual Field: Mapping the Theoretical Landscape. Paper presented at the 8th World Congress of Comparative Education, Charles University, Prague-Czechoslovakia, July, 1992, p. 31.

diverse perspectives, address this need to sketch in some "first principles" for a social cartography oriented toward charting the variable topography of social space and spatial practices today. In the opening section, Mapping Imagination, creative ideas from cultural geography, social history and comparative education, among others, are used to suggest how comparative studies and the human sciences might benefit from the use of a polyocular, or perspectivist approach. This section examines challenges facing all knowledge fields today as postmodernist sensibility, with its rejection of universals and attention to multiplicity and difference, permeates the academy, the media and individual consciousness. The four chapters in this section use both modernist and postmodernist orientations to query how mapping imagination can help comparativists to better identify and compare both similarity and difference.

Imagination can also be seen to work through spatial representation at the individual level. Said, for example, suggests that space may acquire emotional and even rational sense through a poetic process where empty reaches of space and distance are converted into meaning in the here and now:

> There is no doubt that imaginative geography or history help the mind to intensify its own sense of itself by dramatizing the distance and difference between what is close . . . and what is far away.[26]

The concept of spatial imagination seen as an ability to reveal multiple intersections,[27] to resist disciplinary enclosures and cross borders,[28] and come into critical dialogue with other imaginations[29] is a guiding principle of the social cartography project.

The book's second section, Mapping Perspectives, demonstrates how ways of seeing portray relationships--in this case from the viewpoints of the positivist, humanist, cognitive and literary traditions. Four chapters examine how the application of spatial ideas and techniques have elaborated mapping in specialized areas, such as scientific geographical information systems (GIS) and land use planning, humanistic and environmental studies, management and business studies, and comparative literature, where maps are increasingly seen as rhetorical strategies that variously facilitate processes of learning and unlearning, resistance and transformation or, perhaps, serve as agendas for coercion and containment. The principle illustrated is that disciplinary theory and practice continually interact in a process of mutual referral. Theory is not detached from the realities of everyday life. It is a construct with semantic content, "and it is the responsibility of analysis (and mapping) to return it there."[30]

Mapping Pragmatics, the third section of the book, provides an invitation to social cartography with case study reports of mapping in practice and mapping as practice--i.e., studies that facilitate a spatial understanding of power relations and transitions. Here, contributors variously map ways of seeing the organizational space of third world educational interventions, a textual utopia-building effort, local perceptions of a rural

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development project, the expanding representational space of international corporations, intercultural communication problems in educational consultancies, the intertextual field of environmental education, and innovative social mapping techniques. While these reports on mapping practice evidence something of the indeterminate and incomplete aspects of provisional cartographic representation, they also suggest how maps can open space for present difference, represent conflicting visions of the future (as with Escobar's "maps . . . of struggle"), and enhance our ability "to ironize our own claims to truth" vis-a-vis competing claims.[31]

In the closing section, Mapping Debates, chapter authors use critical perspectives to engage and question a good deal of what is argued in the preceding three sections. Here we find the project's critical reflexive principle that interrogates all knowledge, and especially my contention that a ludic mapping practice can help to subvert mapping's colonizing role under modernity--as suggested by Martin Jay at the outset--and open a site of resistance in postmodernity, all the while seeking to undermine its own authority as a new discourse of power.

These chapters strongly suggest that comparative education, as with the related fields of comparative literature, comparative politics and the like, now shares a common interdisciplinary pursuit of cultural theory and situated knowledge generation processes, as well as the more traditional cross-cultural comparison of national practices. Huggan argues that this new agenda moves alterity, or awareness of the Other, to the center of comparative studies:

> Comparativists are not syncretists. That they choose to outline similarities among works deriving from different cultures or disciplines, or written in different languages does not imply the erasure or compromise of their differences . . . Comparativists are best seen as mediators moving among texts without seeking to `reconcile' or `unify' them. What is needed . . . is a flexible cross-cultural model [i.e., a map] that allows the nature of each country's [or actor's] vision of itself to be redefined as a source of creative power. . . . The map should be seen as a symbolic battleground for competing heterodoxies . . . [maps] may attempt to regulate these `territorial disputes,' but they cannot resolve them.[32]

From this postmodern view, objectivity is no longer about unproblematic objects, but about always partial translations and how to portray and compare imbricated views of local knowledge.[33]

Because social cartography allows the comparisons of multiple realities and contested codes in a representational construct, it will also have potential to serve as a metaphorical device for the provisional representation, if not for the iconographic unification, of warring cultures and disputatious communities. Every social map is the product of its makers and open to continuous revision and interrogation. In the process of mapping meaning, the subject is seen to be mobile and constituted in the shifting space where multiple and competing discourses intersect. This view advances neither the self-sufficient Cartesian subject of modern western humanism nor the radically de-centered Baudrillardian subject seen by extreme poststructuralism. Instead, the mapper is articulated around a core self that is nonetheless differentiated locally and historically.[34] Social mapping, in this view, makes possible a way of understanding how sliding identities are created, and how the multiple connections between spatiality and subjectivity are grounded in the contested terrain between intellectual communities.[35]

Feminist writers have effectively used social cartographic imagery and spatial metaphors in this manner to expose and challenge what they see as patriarchal representations and to chart new social relations grounded in feminist knowledge and experience.[36] Kolodny, for example, explains the strategic role of spatial metaphors in the engineering of social change in American history.[37] The land-as-woman metaphor was central, while the map served both as a metaphor of male control and domestication of the continent (i.e., the virgin land) and for the continuing domesticity of women. Feminist metaphors and use of an empowering spatial language invert and counter this story. Feminist cartographers--and especially those using postcolonial perspectives--have effectively subverted the complicity of maps in attempts to maintain what they see as an oppressive status quo, and have much to offer a critical social cartography practice.

Ethnic, ecological and regional groups have also been active in creating alternative maps that disrupt or reject the truth claims of central authority.[38] Such "resistance" maps--both on the left and the right--seek to avoid capture in established power grids, to create counter mapping that presents alternative world views, to open new rhetorical spaces, and to articulate postcolonial ambitions.[39]

It would seem that the time is propitious for comparative educators to consider how a cartography of relations might help us move beyond our present Cartesian anxiety to a more open play of perspectives.[40] I believe that social cartography, with its deconstructive view of all modes of representation and with its ludic tolerance of new ideas and diverse ways of seeing, can help us make this intellectual journey. In addition to its critical and demystification utility to make visible ideas and relations that otherwise might remain hidden, social cartography will also be useful to convert increasing flows of data into usable information. This will help comparativists recognize patterns and relationships in spatial contexts from the local to the global. In conceptual terms, cartographic visualization can also provide a link between what were once viewed as incommensurable epistemological paradigms or perspectives, now presented as nodes within shifting intertextual fields.[41] Perhaps Norman Davies sensible and pragmatic advocacy puts the case for a turn to mapping multiple perspectives most succinctly:

> By complementing the findings of one partial perspective with the findings

> of other approaches, we can hope to create an overall picture [map] which will be fairly comprehensive and reasonably accurate, and will maintain a sense of proportion.[42]

I hope my accounting efforts in this section will better enable the reader to see utility in the practice of social mapping as it opens traditional cartographic representation to multiple perspectives and the play of difference. While mapping does not resolve the conflict of interpretations and sense of disorientation that would seem to be the defining characteristics of our era, our project contends--and seeks to illustrate--that social mapping will nevertheless be useful to construct, as Davies advocates, more "comprehensive and reasonably accurate" re-presentations of social and cultural phenomena. With the new conceptual tools of social cartography, comparative educators and other knowledge workers will be better able to visualize and re-present the simultaneity, diversity, and power inherent in all the social "scapes" that can be seen to constitute our challenging new world. I believe that this new way of seeing and figuring the "real" in all its complexity will give comparative educators--at the least--a useful alternative to the scopic regimes of modernity discussed in Part One. In Part Three some cartographic yield from our project is presented to support this claim and invite collaboration.

Part Three The Emergence of Social Cartography: More New Maps

> If modernism expresses the desire to capture a sense of wholeness, postmodernism tries to create a picture with emphasis on all the parts where nothing is left out. While avoiding conflictual dualism, it collects and combines as much as possible into a new vision. It is a heterotopia of mixed places and themes that views utopia in terms of multiplicity and difference . . . and attempts to reformulate utopian desire in explicit opposition to binary organization and totalizing models.[43]

With the advent of the social cartography project described in the preceding section, comparative education joins a variety of related efforts to remap theory in global, local and personal space.[44] Figure 22, for example, maps the space of theories in comparative education as a heterotopic intertextual field constructed by difference. This postmodern space accepts and reinscribes (as mininarratives) all theories, codes, language games, simulations or visual forms. Its position in Figure 1 falls within the scopic regime of deconstructive perspectivism (DP) and rather close to the de-differentiation node. This theory map opens to all claimants space for inclusion in the intellectual field and social milieu. Situating the mapper in this representation suggests--in a notably premodern manner that

> . . . by the act of attributing spirit to everything, giving every element of the landscape its own point of view, shows the [mapper] to be alive to the fact that there are other powers in the world, [that social cartography] is not a

> fantasy of omnipotence. It is a matter of doing your best in a difficult, hostile world . . . in which the spectator is alive to forces of a complexity we can barely grasp.[45]

Figures 23 and 24 elaborate possibilities to remap or "modestly" interact with Figure 22. The first does so with expanded attention to theoretical relations, and to borrowing, critique, exchange, and flows. The second with great perceptive originality bisects and enters into the space of Figure 22 to illustrate how the invisible (i.e., "previously hidden narratives") can emerge and enter the horizontal plane of social cartographic vision in a manner masked to view when seen from above, as in Figure 22. Liebman situates the viewer inside the map (i.e., estrangement) and serves as tour guide:

> Working with Paulston's map, consider the possibility of viewing the map in cross section, cut away where indicated by this dotted line. If we stand in Figure 24 at the point marked "x" and look eastward, Paulston's map may appear as shown in the center: a world of both direction and dimension.
>
> This map also offers a hypothesis applicable to concerns regarding mapping and its capacity for discovering, revealing and placing what Susan Star calls `previously hidden narratives.' We can make the map reader aware of unheard voices, represented here by the blank circles embedded under the surface of the map. Viewing the map this way is similar to standing on the north wall of the Grand Canyon, gazing across at people standing on the far wall while being aware that there are hidden stories under the surface, embedded in the stone of the canyon's wall just under where these people we see are standing. These hidden narratives await not discovery, but a recognition that places them on the map, that seems to make them "spring up" and take their place among the developing, moving and growing theories already placed within the social map's parameters (p. 210).

While Figures 25 and 26 also break new ground in visualizing relations--here in exchanges among key actors in education and gender issues--a situating of the mapper in these fields of relations would help to make the representations more insightfully ironic and problematic. They are nevertheless notable for retention of a CR problematic within a field of multiple perspectives. This is the challenge that defeats, or eludes, most critical theory advocates today.

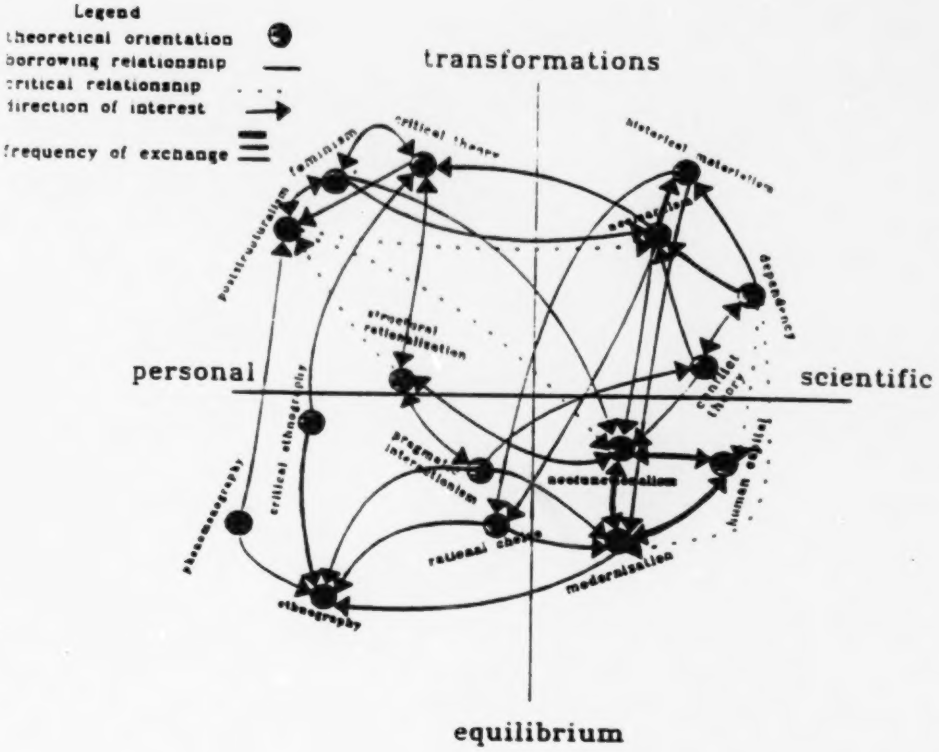

Figure 23. A Revised Macro-Mapping of Paradigms and Theories in Comparative and International Education. V. D. Rust, "From Modern to Postmodern Ways of Seeing Social and Educational Change." In R. G. Paulston, ed., *Social Cartography: Mapping Ways of Seeing Social and Educational Change*". (New York: Garland, 1996), p. 49.

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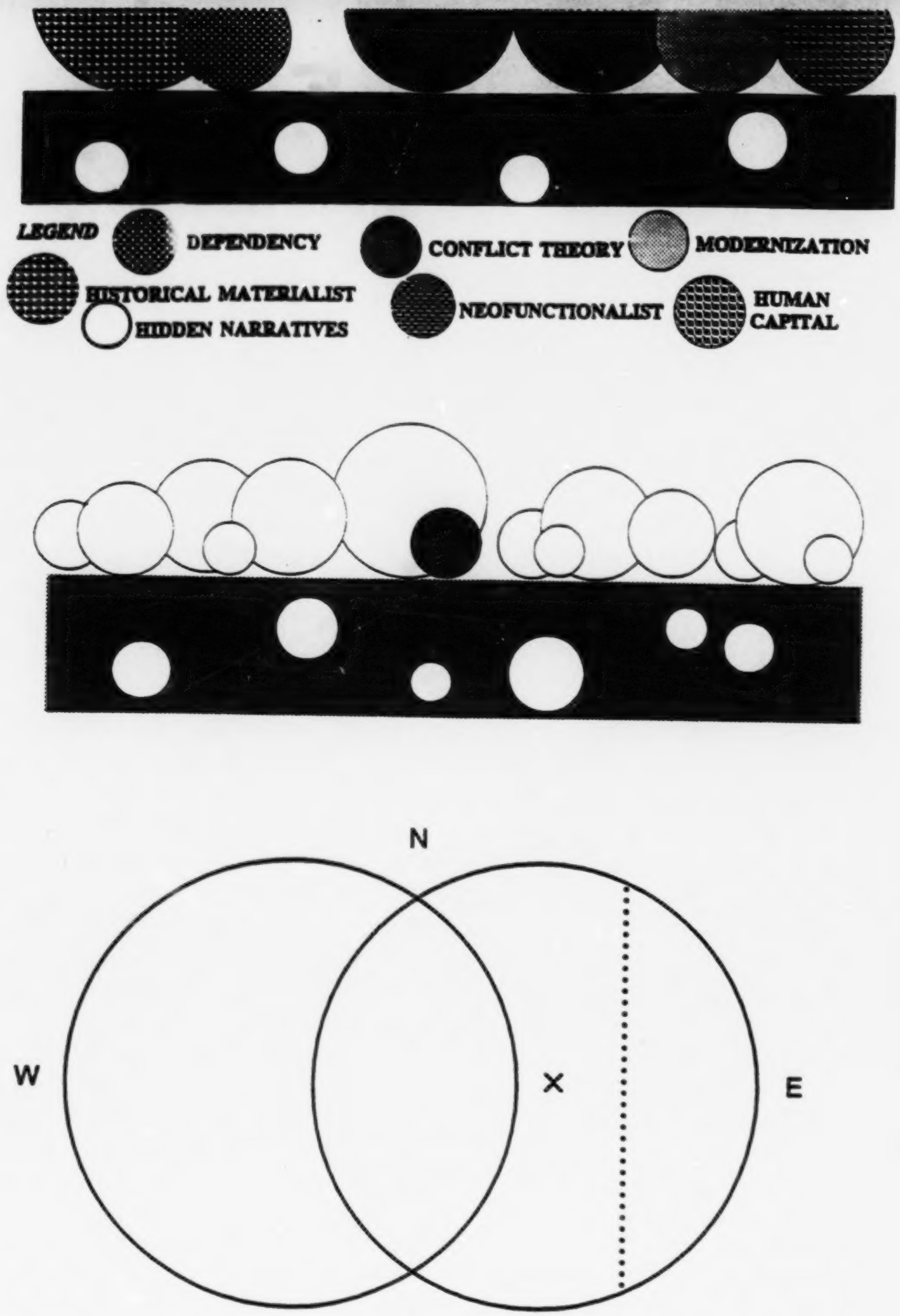

Figure 24. A cross section view of "Paulston's map" for discovering/revealing and placing previously hidden narratives." M. Liebman, "Envisioning Spatial Metaphors From Wherever We Stand" in R. G. Paulston, ed., *Social Cartography: Mapping Ways of Seeing Social and Educational Change*", (New York: Garland, 1996), p. 211.

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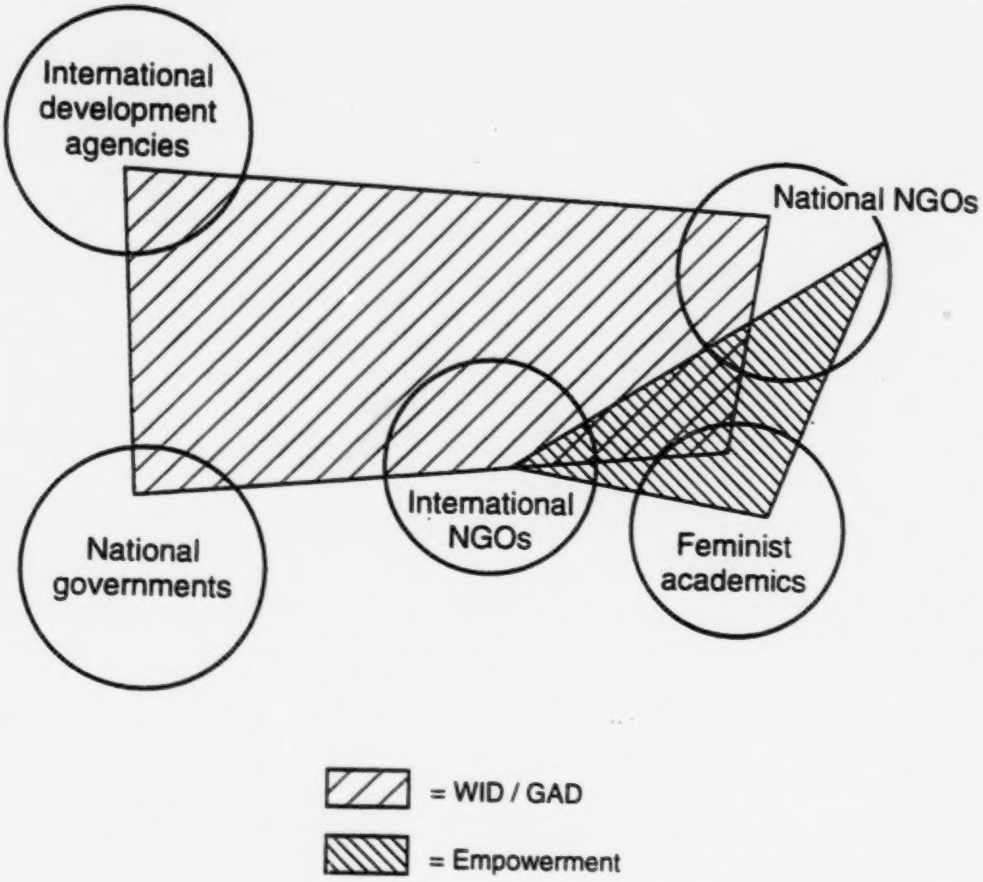
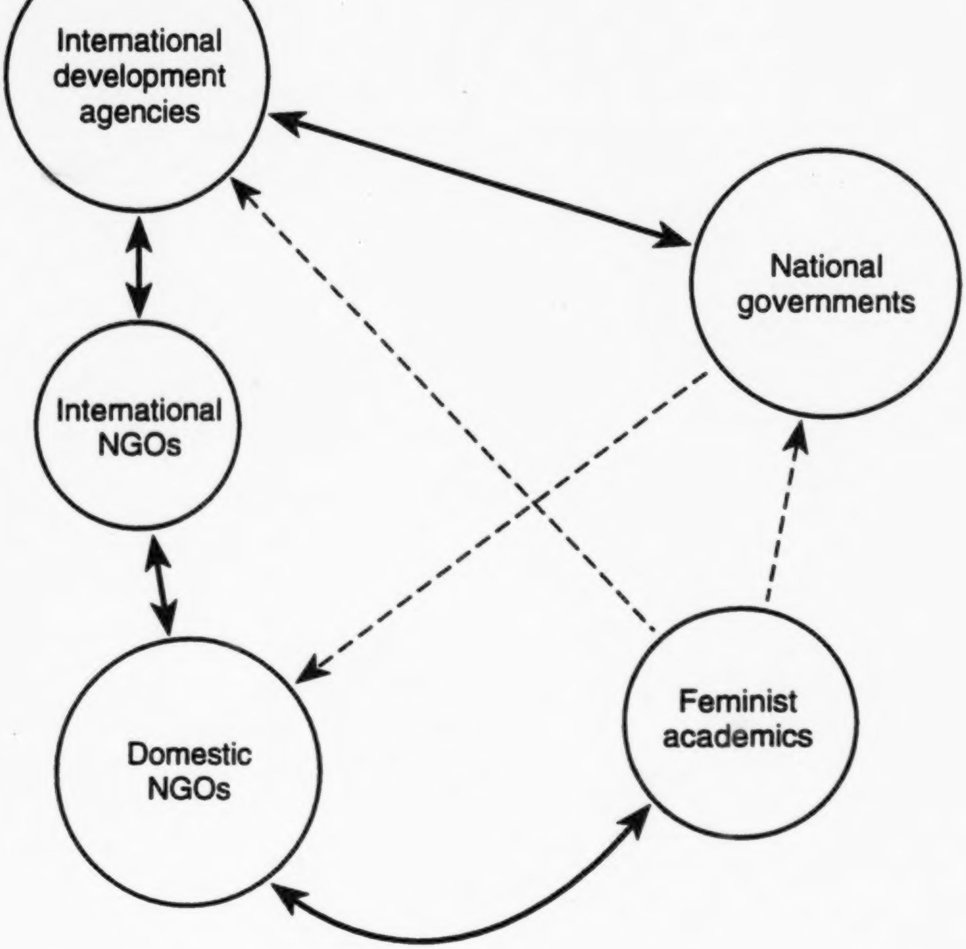


Figure 25. A Map of Conceptual Proximity and Remoteness Among Key Actors in Gener Issues. N. Stromquist, In R. G. Paulston, ed., "*Social Cartography: Mapping Ways of Seeing Social and Educational Change*",(New York: Garland, 1996), p. 244.



LEGEND: _____ denotes strong border crossing
——— denotes sporadic border crossing

Figure 26. A. Map of Key Actors and Border-Crossing in International Gender Work. N. Stromquist. "Mapping Gendered Spaces in Third World Educational Intermentions." *Social Cartography: Mapping Ways of Seeing Social and Educational Change*. R. G. Paulston, ed. (New York: Garland Publishers. 1996) p. 230.

The same may be said for Figures 27 and 28 where fields of educational practice are figurated as fields of difference encompassing perspectives that modern vision saw--if at all--as incommensurate and subversive to reason. The contrast here with technical rationalist representations of different views in practice--as in Figures 5 and 8 for example--could not be greater. Or could they? I will let the reader examine the figures and decide for herself.

Figure 29 is, in the words of several colleagues, "a mess." Here a poststructuralist preference for seeing practices (writing) as sites constructs an intertextual field, an acentered yet situated "reality" akin to Harraway's characterization of postmodern multiplicity as "a powerful infidel heteroglossia.[46] As in Lefebvre's view, language new becomes our "instrument of veracity" with which free-form mapping seeks to "decode [to] bring forth from the depths . . . what is sayable, what is susceptible to figuration."[47] In this rizomatic elaboration of textual relations is the acknowledged presence of a "fiduciary subject," or embodied "mapper," who as a socially articulated self is the true site of agency. Here the overlapping of discursive and physical space reveals the body as the primary site of political authentication and political action.[48] From the DP view, social mapping escapes the violence of logocentric enclosure and instead elicits an embodied discourse system or set of readings that are frequently disrupted and in need of reordering. Social cartography provides a visual means to facilitate reordering and subject reconstruction within a physical field and a system of symbolic exchange. Identity is seen to be largely discursive and produced through the interaction of verbal *and* visual texts. This "legible social body" presents a set of cultural codes that "organize the way the body is apprehended and that determine the range of socially appropriate responses."[49] Accordingly, Figure 29 represents my provisional and local structuring of "comparative education" as both an intertextual field, and as a set or assemblage of contradictory yet complimentary cultural codes.

Conclusions

And so we return to Judith Wright *et al* with some ideas and illustrations of how comparative educators and others have sought to claim their space[50] in ongoing efforts to map the intersections of theory and identity in a time of fantastic complexity and intermingling. We observe that in comparative education discourse at least, the three scopic regimes of modernity continue to differentiate and prosper despite postmodern prognostications to the contrary. And with the timely emergence of postmodern fields of figuration, we have for the first time a scopic regime, open to all ways of seeing, yet privileging none.[51] This social cartography perspective provides a new methodology better able to reinscribe and pattern our increasingly ironic understanding of reality. As some recent work in quantum mechanics suggests, science in the future will be increasingly probabilistic and speculative--in other words, ironic.[52] If, as this work suggests, reality is a "participatory" phenomenon, defined in some sense by the questions we put to it, then the scopic regime of postmodernity will be a useful comparative tool/idea for our time.

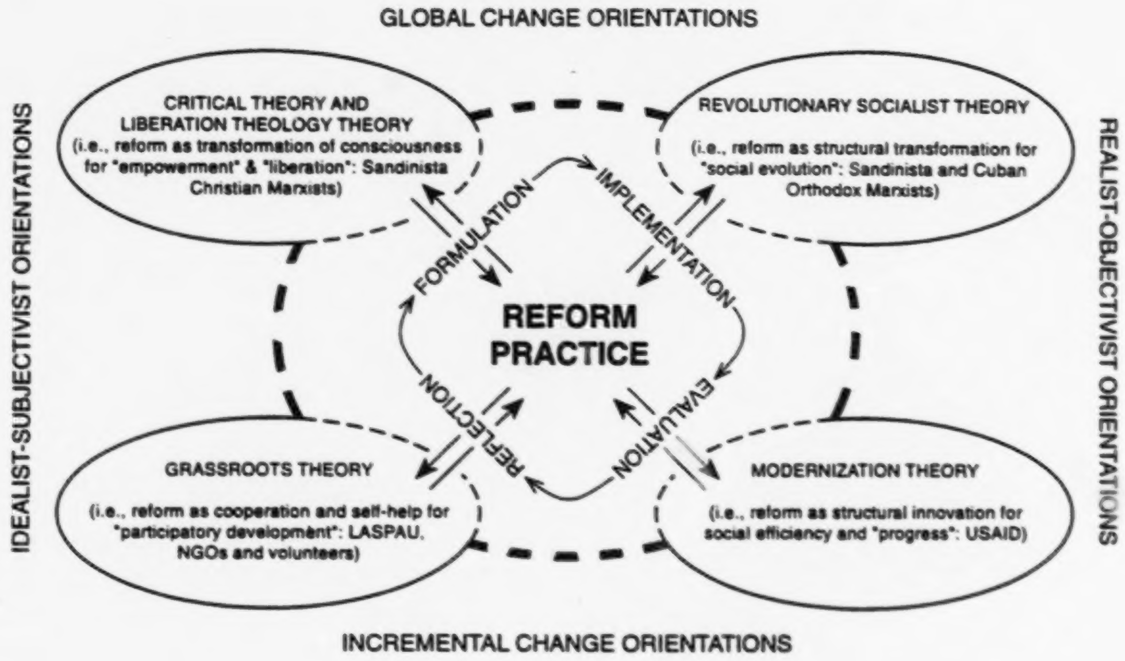
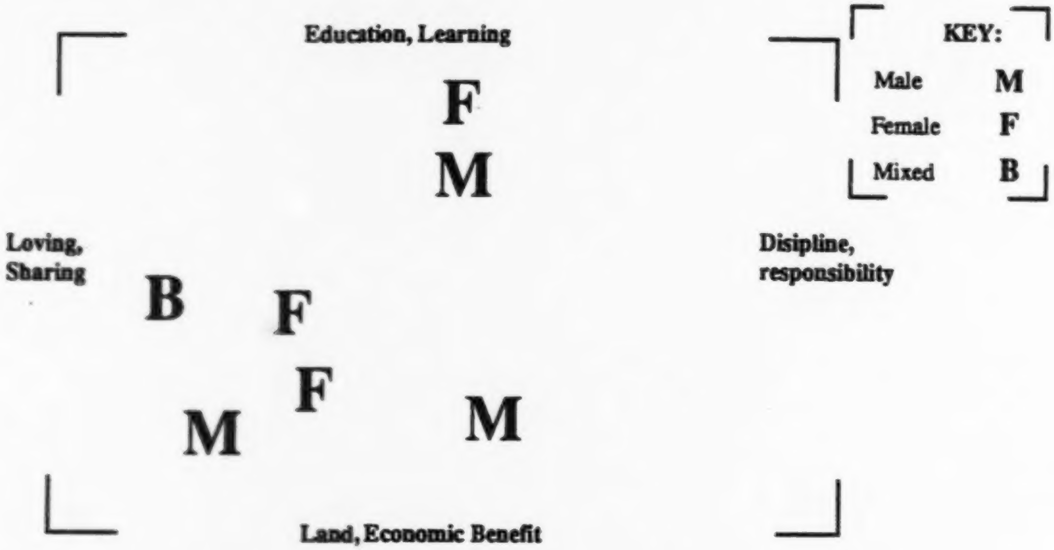

GLOBAL CHANGE ORIENTATIONS
CRITICAL THEORY AND LIBERATION THEOLOGY THEORY
(i.e., reform as transformation of consciousness for "empowerment" & "liberation": Sandinista Christian Marxists)
REVOLUTIONARY SOCIALIST THEORY
(i.e., reform as structural transformation for "social evolution": Sandinista and Cuban Orthodox Marxists)
FORMULATION
IMPLEMENTATION
REFORM PRACTICE
REFLECTION
EVALUATION
GRASSROOTS THEORY
(i.e., reform as cooperation and self-help for "participatory development": LASPAU, NGOs and volunteers)
MODERNIZATION THEORY
(i.e., reform as structural innovation for social efficiency and "progress": USAID)
INCREMENTAL CHANGE ORIENTATIONS
IDEALIST-SUBJECTIVIST ORIENTATIONS
REALIST-OBJECTIVIST ORIENTATIONS

Figure 27. A Micro Mapping of Educational and Social Change Theories in Nicaraguan Higher Educational Reform Practice. R. G. Paulston, "Mapping Discourse in Comparative Education Texts", *Compare* 23, no. 2 (1993), p. 107.

THE SOCIAL GEOGRAPHY OF 7 RURAL HONDURAN COMMUNITY GROUPS: GENDER



THE SOCIAL GEOGRAPHY OF 7 RURAL HONDURAN COMMUNITY GROUPS: PEASANT ORGANIZATION INVOLVEMENT

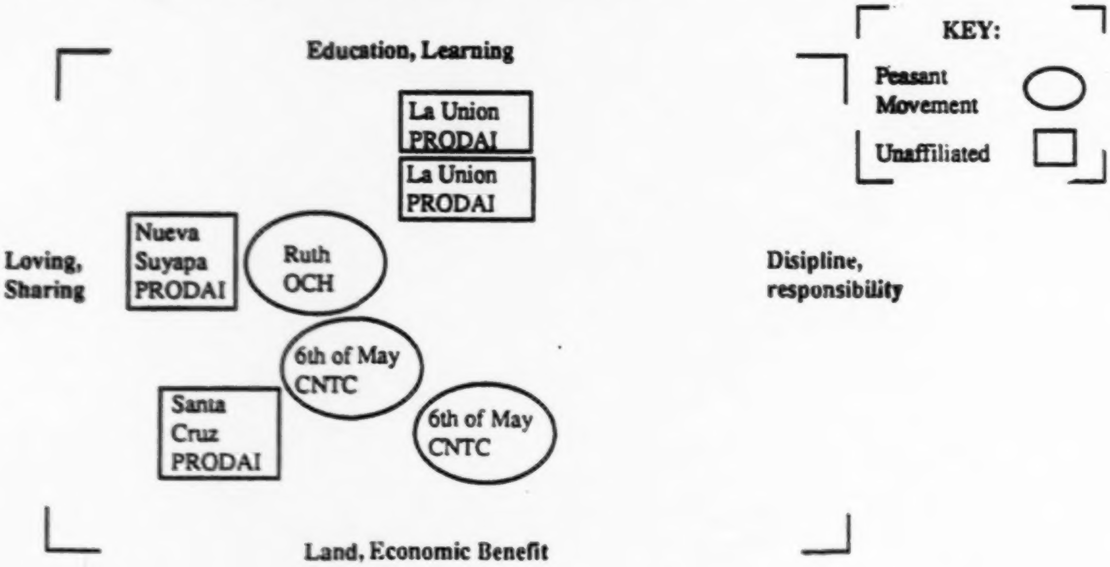


Figure 28. The Social Geography of Rural Honduran Community Groups: Mapping Gender and Involvement. C. Mausolff, "Postmodernism and Participation in International Rural Development Projects", In R. G. Paulston, ed. *Social Cartography: Mapping Ways of Seeing Social and Educational Change.* (New York: Garland, 1996), pp. 286 & 287.

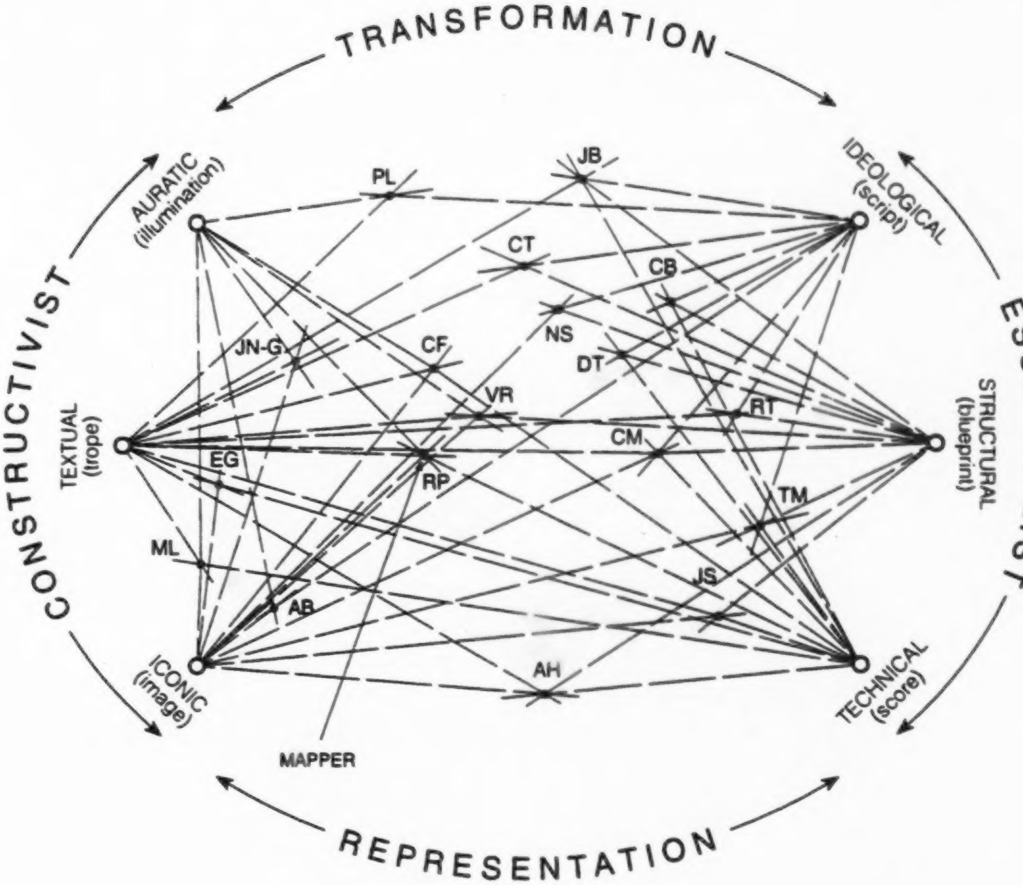


Figure 29. A "Nomadic" intertextual mapping of Social Cartography in the style of G. Deleuze and F. Guattari. R. G. Paulston, "Envoi" in *Social Cartography: Mapping Ways of Seeing Social and Educational Change,* R. G. Paulston, ed. (New York: Garland. 1996), p. 439.

NOTES

1. M. Jay, "Scopic Regimes of Modernity," in *Vision and Visuality*, ed., Hal Foster (Seattle, WA: Bay Press, 1988), pp. 3-28.

2. See J.-F. Lyotard, *Driftworks* (New York: Semiotext(e): 1984), p. 80; and M. Merleau-Ponty, *Phenomenology of Perception*, Trans. C. Smith (London: Routledge, 1986).

3. J. Wright, *Collected Poems, 1942-1985*, (North Ryde, Australia: Angus and Robertson, 1994), p. 30.

4. F. Nietzsche, *On the Genealogy of Morality*. (Cambridge: Cambridge University Press, 1994), p. 92.

5. A. Escobar, *Encountering Development: The Making and Unmaking of the Third World*. (Princeton, NJ: Princeton University Press, 1995), pp. 10-11.

6. W. J. T. Mitchell, *Picture Theory* (Chicago: University of Chicago Press, 1994), p. 12. See also the perceptive review by Valerie Holman, "Visual Impact: Three Books On the Interaction of Text and Image," *Art History* 18(6) (December, 1995), 595-598. Holman contends that "there is an increasing dominance of the visual over the verbal . . . in representations and theories that have originated in the late twentieth century" (p. 595).

7. M. Jay, p. 13.

8. See R. Rorty, *Philosophy and the Mirror of Nature* (Princeton: Princeton University Press, 1979).

9. For an insightful discussion of Marx's great suspicion of including visual texts in his iconoclastic rhetoric and ideological criticism see W. J. T. Mitchell, "The Rhetoric of Iconoclasm: Marxism, Ideology and Fetishism" in his *Iconology: Image, Text, Ideology* (Chicago: University of Chicago Press, 1986).

10. See R. Barthes, *The Responsibility of Forms: Critical Essays on Music, Art, and Representation* (New York: Hill and Wang, 1985), pp. 86-87.

11. For a pioneering textual portrayal of the Faust myth and its relevance for our time, see M. Berman, *All That Is Solid Melts Into Air: The Experience of Modernity* (London: Verson, 1982). Here the World Bank and its ilk are seen to be in the vanguard of Faustian development mania.

12. J. Baudrillard, *Symbolic Exchange and Death* (London: Sage, 1993), pp. 131-132.

13. J. B. Harley. "Maps, Knowledge and Power," in *The Iconography of Landscape*, eds. D. Cosgrove and S. Daniels (Cambridge: Cambridge University Press, 1988), pp. 277-312. G. Huggan, "Decolonizing the Map: Post-Colonialism, Post-Structuralism and the Cartographic Connection." *Ariel* 20 (December 1989): 115-131. E. Soja. *Postmodern Geographies: The Reassertion of Space in Critical Social Theory*. (London: Verso, 1989).

14. P. Bourdieu. "Social and Symbolic Power." *Sociological Theory*, 7 (1989): 14-25; J.-F. Lyotard, *The Postmodern Condition: A Report on Knowledge* (Minneapolis: University of Minnesota Press, 1984).

15. See G. Anzaldúa. *Borderlands/La Frontera: The New Mestiza*, (San Francisco: Spinsters/Aunt Lute); C. T. Mohanty. "Cartographies of Struggle" in *Third World Women and the Politics of Feminism*, eds. C. T. Mohanty, et al. (Bloomington: Indiana University Press, 1991, pp. 1-49; A. Rich. "Notes Towards a Politics of Location" in *Blood, Bread and Poetry* (New York: Norton, 1986).

16. R. Lawson. "Free-Form Comparative Education," *Comparative Education Review* 19 (October, 1977), 345-353.

17. G. Bateson. *Mind and Nature: A Necessary Unity* (New York: Dutton, 1979), p. 2.

18. K. E. Weick. "Cartographic Myths in Organizations," in *Mapping Strategic Thought*, ed. A. S. Huff (Chichester, UK: John Wiley & Sons, 1990), p. 2.

19. K. M. Kirby. *Indifferent Boundaries: Spatial Concepts of Human Subjectivity*. (New York: Guilford, 1996), p. 21. See also P. Yaeger. *The Geography of Identity*. (Ann Arbor: The University of Michigan Press, 1996). Yaeger argues that we are in the midst of a redefinition of space that requires contradictory mappings of global, local and individual space, that constructs "a series of improbable maps with the power to apprehend the strange effects of ordinary space and to remedy the geometry of forgetting" (p. 31).

20. E. Soja and B. Hooper. "The Spaces That Difference Makes: Some Notes on the Geographical Margins of the Cultural Politics," in *Place and the Politics of Identity*, eds. M. Keith and S. Pile (New York: Routledge, 1993), p. 184.

21. R. Paulston. "Comparative Education: Paradigms and Theories," in *International Encyclopedia of Education*, eds. T. Husén and N. Postlethwaite (Oxford: Pergamon, 1994), pp. 923-933.

22. P. K. Moser. *Philosophy After Objectivity: Making Sense in Perspective* (Oxford: Oxford University Press, 1993), p. 227. See also R. Usher and R. Edwards, *Postmodernism and Education* (London: Routledge, 1994) where the authors contend that "because postmodernism presents no foundational standpoint and no new *theory*, . . . it teaches us to

be skeptical of all systematic theorists" (p. 29). They focus instead on the ludic or playful practices of postmodernism as "a means of challenging the power of representation and totalizing discourses (discourses that present themselves as the final `truth' which explain everything) without falling into another equally oppressive power discourse" (p. 15). To deny the ludic they argue is to deny desire: "It is a reaffirmation of a universal reason and a formal computational rationality as the primary focus of discourse and practice. In revealing the ludic, we can at least provide the opportunity for people to desire alternatives" (p. 224).

23. M. Liebman. The Social Mapping Rationale: A Method and Resource to Acknowledge Postmodern Narrative Expression. Ph.D. dissertation, University of Pittsburgh, 1994, p. 236.

24. R. Helgerson. "The Land Appears: Cartography, Chorography and Subversion in Renaissance England." *Representations* 16 (1986): 8-16; and A. Appadurai. " Disjuncture and Difference in the Global Cultural Economy." *Public Culture* 2 (1990): 1-24.

25. R. Paulston, ed. *Social Cartography: Mapping Ways of Seeing Social and Educational Change*. (New York: Garland, 1996). Forthcoming.

26. E. Said. *Orientalism*. (London: Routledge, 1978), p. 55.

27. R. Hayhoe. *China's Universities, 1895-1995: A Century of Cultural Conflict*. (New York: Garland, 1996). G. Lenski. "Social Taxonomies: Mapping the Social Universe." *Annual Review of Sociology* 20 (1994): 1-26.

28. P. Price-Chalita. "Spatial Metaphor and the Politics of Empowerment: Mapping a Place for Feminism and Postmodernism in Geography?" *Antipode*, 26 (1994): 236-254.

29. See I. Epstein. "Comparative Education in North America: The Search for the Other Through the Escape from Self?" *Compare* 25 (1995): 5-16 where these aims are also addressed. Two Italian philosophers, A. Dal Lago and A. Rovatti explore the problem of mapping perspectives grounded in wildly different views of reality. They advocate a sort of "weak thought" theory capable of encompassing difference with "modesty." See A. Dal Lago and A. Rovatti *Elogio del Pudor*. (Ediciones Paidos: Barcelona, 1989). "Weak though" is ironic and reflexive. It uses metaphors to say, to sketch, what it thinks it sees. This metaphor is not so much the thought, but a suggestion of how to know the thought "across a cultural horizon . . . in the sense of a proximity" (p. 23).

30. H. Liggett and D. C. Perry, eds. *Spatial Practices: Critical Explorations in Social/Spatial Theory*. (Thousand Oaks, CA: Sage, 1995), p. 10.

31. P. Foreman. "Truth and Objectivity Part 1: Irony," in *Science*, 269 (1995): 565-567. While Jean Francois Lyotard advocates a way of knowing that opens a space for singularities, i.e., "this commotion of ants . . . that constantly come into contact with one another through the fragile antennae of sensibility," he offers no ideas how such a social cartography might be presented. See J. F. Lyotard *The Postmodern Explained*. Trans. by D. Barry *et al.* (Minneapolis: University of Minnesota Press, 1992): p. 22. Pierre Bourdieu's "participant objectivation" approach is to see the research process as a social relation where observer reflexivity based on "a sociological 'feel' or 'eye' enables one [i.e., Bourdieu] to perceive and monitor on the spot, as the interview is actually being carried out, the effects of the social structure within which the interview is taking place." This he claims will give us a more reflexive social science, and a "command of the inevitable effects of that process" (p. 18). See his essay, "Understanding" in *Theory, Culture and Society, 13* (1996), pp. 17-37. Bourdieu has characterized this process of realist-objectification as "the real is relational" in total contrast to Hegel's "the real is the rational." While this process of revealing the structuring pressure behind actor's views with extraordinary care is an advance over crude Marxist notions of "true" and "false" consciousness, it continues to privilege the narrow view of an ideological elite and presents, for example, a total denial of "subjectivist relativism" as a conceivable actor perspective choice. Social mapping, open to all perspectives, does not have this ideological problem. See P. Bourdieu, *La Misere du Monde* (Paris: Seuil, 1993), p. 10.

32. G. Huggan, *Territorial Disputes: Maps and Mapping Strategies in Contemporary Canadian and Australian Fiction* (Toronto: University of Toronto Press, 1994), p. xi.

33. N. Smith and C. Katz. "Grounding Metaphor: Towards a Spatialized Politics," in *Place and the Politics of Identity*. M. Keith, ed. (New York: Routledge, 1993), pp. 91-108. See also the fruitful ideas of C. Geertz in this regard in his now classic *Local Knowledge: Further Essays in Interpretive Anthropology* (New York: Basic Books, 1983).

34. J. Flax. *Thinking Fragments: Psychoanalysis, Feminism and Postmodernism in the Contemporary West*. (Berkeley: University of California Press, 1990).

35. K. M. Kirby, p. 13.

36. See S. Ardener, ed. *Women and Space: Grounded Rules and Social Maps* (London: Croon Helm, 1981); and R. Diprose and R. Ferrell, eds. *Cartographies: Poststructuralism and the Mapping of Bodies and Spaces* (St. Leonards, Australia: Allen and Unwin, 1991).

37. A. Kolodny. *The Lay of the Land: Metaphor as Experience in the History of American Life and Letters*. (Chapel Hill: University of North Carolina Press, 1975).

38. D. Aberley. *Boundaries of the Home: Mapping for Local Empowerment* (Gabriola Island, BC: New Society, 1993).

39. See for example A. Fischer. "Power Mapping: New Ways of Creating Maps Help People Protect Their Landscapes." *Utne Reader* 65 (1994): 32-35; and M. Foucault, "Of Other Spaces," *Diacritics*, 16 (Spring, 1986); pp. 22-27; and Mohanty, pp. 1-49.

40. V. Masemann, "Ways of Knowing: Implications for Comparative Education," *Comparative Education Review*, 34 (1990); pp. 465-473.

41. See, for example, E. H. Epstein's stern warning that "certain dissenting positions in Comparative Education represent not simply alternative interpretations of phenomena, but challenge the field's viability"(p. 5) in his "The Problematic Meaning of Comparison in Comparative Education" in *Theories and Methods in Comparative Education*, eds. J. Schriewer and B. Holmes, (Frankfurt am Main: Peter Lang, 1988), pp. 3-24.

42. N. Davies, "The Misunderstood Victory in Europe" *The New York Review of Books*, 43 (1995): pp. 11-14.

43. T. S. Siebers, "What Does Postmodernism Want? Utopia," in *Heterotopia: Postmodern Utopia and the Body Politic* (Ann Arbor: The University of Michigan Press, 1994), pp. 8 and 23.

44. For a highly original analysis comparing arguments (largely from S. Sontag and J.-F. Lyotard) that modernity favors a "discursive" sensibility giving priority to words over images while post modern sensibility gives priority to the "figural," see S. Lash, "Discourse or Figure ? Postmodernism as a Regime of Signification," *Theory, Culture and Society, 5* (1988), pp. 311-336.

45. J. Fenton, "On Statues," *The New York Review of Books* 43 no. 18 (1996), p. 40.

46. D. Harraway, "A Manifesto for Cyborgs, *"Socialist Review*, 80 (1985), p. 100.

47. H. Lefebvre, *The Production of Space* (Oxford: Blackwell, 1991), p. 139.

48. A. R. Stone, *The War of Desire and Technology at the Close of the Mechanical Age* (Cambridge, MA: MIT Press, 1991), p. 91. Lather uses a “rhizome” approach to enter the interstices of a text and probe its gaps, complexity, paradox, webbing--in sum, its conversation. Rhizomes as metaphors produce paradoxical objects. They are about the move from hierarchies to networks of tangled ideas uprooted from epistemological fields. “Rather than a linear progress, rhizomatics is a journey among intersections, nodes, and regionalizations, through a multicentered complexity. As a metaphor, rhizomes work against constraints of authority, regularity and . . . open thought to creative constructions” (p. 680). See P. Lather. “Fertile Obsession: Validity After Poststructuralism.” *The Sociological Quarterly* 34 (1993): pp. 673-693.

49. Stone, p. 41.

50. In E. Chaplin's advocacy of visual representation in anthropology and sociology, no mention is made of recent advances in comparative postmodern social cartography. See her rather disappointing *Sociology of Visual Representation* (London: Routledge, 1994).

51. In addition to the volume cited in note 25, the interested reader is also referred to the six Social Cartography Project research reports complied in R. G. Paulston, ed. *Mapping Multiple Perspectives: Research Reports of the University of Pittsburgh Social Cartography Project, 1993-1996*. Pittsburgh, PA, Department of Administrative and Policy Studies, University of Pittsburgh.

52. See J. Horgan. *The End of Science: Facing the Limits of Knowledge in the Twilight of the Scientific Age*. (New York: Addison-Wesley, 1996), or the summary version in J. Horgan, "Science Set Free From Truth: Thinking the Unknowable. Physicists, Too, Are Seduced By Postmodernism." *The New York Times*, July 16, 1996, p. A11. Horgan is a senior writer at the *Scientific American*.

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